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6. John G. Mitchell, "Wilderness—America's Lands Apart," *National Geographic*, November 1998, pp. 2-33. (See pages V.D29-36)
7. Christina Nealon, "In Wilderness, Don't Phone Home," *High Country News*, Vol. 30, No. 15, August 17, 1998. (See page V.D37)
8. Donald Worster, "The Wilderness of History," *Wild Earth*, Fall, 1997, pp. 9-13. (See pages V.D39-42)
9. Roderick Nash, "Wilderness Is All In Your Mind," *Backpacker*, February/March, 1979, pp. 39-41, 70-72. (See pages V.D43-47)
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46 Percent of Earth is Still Wilderness

By Paul Rogers, *Bay Area Mercury News*, Wednesday, December 4, 2002

Despite population growth, logging and other environmental threats, nearly half the land on Earth remains wilderness—undeveloped and nearly unpopulated, according to a study released today.

The study by 200 international scientists, the most comprehensive analysis ever done on Earth's wild places and population trends, was seen by some experts as a surprising cause for optimism. Biologists also viewed it as a warning, since only 7 percent of the wilderness is protected.

"A lot of the planet is still in pretty decent shape," said Russell Mittermeier, a Harvard primatologist and president of Conservation International, an environmental group in Washington, D.C., that organized the study.

"We should be happy about that, but we should do everything we can to maintain it. A lot of areas, particularly tropical forests, are under the gun."

Using databases, computer maps and satellite photos, the study found that 46 percent of the Earth's land can be classified as wilderness—from the forests of Russia, Canada and Alaska to the Congo, the Amazon, the Sahara and New Guinea.

That area, totaling 68 million square miles—more than 19 times the size of the United States—is home to only 2.4 percent of world population, or 144 million people.

Antarctica and the Arctic tundra make up roughly a third of that wilderness, or 23 million square miles.

To qualify as wilderness, researchers required areas to have fewer than five people per square kilometer, or 247 acres; at least 70 percent of their original vegetation; and a size of least 10,000 square kilometers, about the equivalent of Yellowstone National Park.

The research was done over two years by scientists from such institutions as the World Bank; Cambridge and Harvard universities; Zimbabwe's Biodiversity Foundation for Africa; and the National Amazon Research Institute in Brazil. The results will be published in a 500-page book next year: "Wilderness: Earth's Last Wild Places," by the University of Chicago Press.

The study was bankrolled in part by donations from Intel co-founder Gordon Moore, of Woodside, a major donor to Conservation International.

The developed world should do more to safeguard wilderness, said Thomas Lovejoy, president of the Heinz Center for Science, Economics and the Environment in Washington, D.C.

"There is also an ethical and moral reason," Lovejoy said. "We are all—every amoeba, every person, every rhinoceros—the end point of 4 billion years of evolution. You just don't snuff that out."

Others noted that civilization's footprint is worldwide.

"There's not a square centimeter on Earth that's not affected by humans and what we produce, from chemicals in the atmosphere to global warming," said Peter Raven, director of the Missouri Botanical Garden. "But this is interesting. It makes the point that there are lots of little-affected areas, more than most people might think."

“Untrammeled,” “Wilderness Character,” and the Challenges of Wilderness Preservation

By Douglas W. Scott, *Wild Earth*, Fall/Winter, 2001-2002, pp. 72-79

“Untrammeled,” “Wilderness Character,”

and the Challenges of Wilderness Preservation

IMPRECISION IN THE MEANING of the word *wilderness* plagued the wilderness movement during its early decades. Efforts to define wilderness in a practical way—usable in land management—began in the 1920s as the first formal wilderness preservation policies were formulated by Aldo Leopold and the Forest Service, and continued in the 1930s, notably in the work of Bob Marshall, the Forest Service, and a New Deal interagency task force. Wilderness Society and Sierra Club leaders and wilderness conference participants struggled with definitional complexities in the 1940s and 1950s. High-level government panels—a Library of Congress study in 1949 and a major federal commission in 1962—also probed these questions.¹

The culmination of all this effort was the Wilderness Act itself. As Howard Zahniser, executive director of The Wilderness Society, drafted the bill in the spring of 1956 that became the Wilderness Act of 1964, he was well aware of the complexities in usage of the word *wilderness* in post-World War II America. He had spelled out the problems in a masterful memorandum submitted to the Library of Congress as a contribution to its 1949 study of wilderness preservation issues:

It is not surprising that the use of the same word “wilderness” both as a description and as a designation should result in some confusion, when it is realized that cultural values have only comparatively recently been placed on the quality of wilderness and that attempts to apply this sense of values to practical land management is much more recent. The terminology of both the philosophy and the land-management technic [sic] is still formative. It is still necessary to be aware of context in using precisely the vocabulary of the movement. It is not yet feasible to insist on limited usage of the term “wilderness,” nor is it expedient to restrict one’s own use of the word.²

Zahniser himself led the way in resolving this long-standing confusion about the word’s definition: it was successful advocacy of the Wilderness Act that finally made it “feasible to insist on limited usage of the term” *wilderness*, because the act established a statutory definition and mandated its use by the four federal agencies that administer wilderness areas.

Designation and stewardship of wilderness

The Wilderness Act definition is an important guide as citizens, agencies, and Congress consider which lands to designate as wilderness. Yet even an act of Congress is not immune

from misinterpretations by federal agencies that can lead to application of the word in ways informed neither by ecology nor by the original intent of the statute itself. Thus, it remains important for wilderness advocates and Congress to step in, as has often been necessary over the 37 years since the enactment of the law, to correct the agencies when they stray into misinterpretations. These misinterpretations—still too often voiced by local spokespeople of the agencies—can mislead the public into believing that the definition sets criteria stricter and more limiting than the act actually allows. As Congress has repeatedly asserted in a long line of precedents, the act's definition accommodates protection for significant expanses of wild land with various histories of past use.³

The definition in the Wilderness Act, correctly understood, also guides the stewardship of wilderness areas once designated. Whatever the differences in the other statutory mandates of the four federal land management agencies, once wilderness areas are designated the overriding mandate in the Wilderness Act is that each shall preserve the "wilderness character" of the areas. This command appears in both the declaration of congressional purpose in subsection 2(a) of the act, and in the management direction in subsection 4(b). In 1983 the Committee on Interior and Insular Affairs⁴ of the House of Representatives reemphasized this mandate, noting that: "The overriding principle guiding management of all wilderness areas, regardless of which agency administers them, is the Wilderness Act (section 4(b)) mandate to preserve their wilderness character."⁵ In issues of wilderness management, too, Congress and wilderness advocates must remain vigilant against misinterpretations that would frustrate the goal of preserving an enduring resource of wilderness.

BUT WHAT IS THE ESSENCE of the wilderness character the agencies "shall" protect? Where in the act do managers look to understand the goal for their stewardship?

The framers of the Wilderness Act intended that the first sentence of subsection 2(c) establish the meaning of "wilderness character":

A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.⁶

These words animate the act's wilderness concept. Without this definition, the subsection 4(b) mandate to preserve "the wilderness character of the area" would be cast

adrift, left floating without clear and practical meaning on which administrators can base stewardship decisions.

At the heart of this goal for wilderness stewardship is the word *untrammeled*. No other word in the Wilderness Act is as misunderstood, both as to its meaning and its function in the law. The Oxford English Dictionary traces *trammel* to Latin and eleventh-century Old French roots meaning a kind of net used to catch fish or birds. Current dictionary descriptions of the word *untrammeled* include "unrestrained," "unrestricted," "unimpeded," "unencumbered," "unconfined," "unlimited."⁷ At the command of the Wilderness Act, we preserve wilderness character—by definition—by leaving "the earth and its community of life untrammeled by man."

Too often, this word has been misread as *untrampled*, or misinterpreted as some synonymous variation of untrampled, with the erroneous connotation that it describes the present physical or ecological condition of the land or its past land-use history. The word was frequently misused in this way in disputes over designation of particular lands as wilderness in the years immediately after the Wilderness Act became law.

In the most blatant case, in the late 1960s, the Forest Service fostered a "purity" concept that distorted the intent of the Wilderness Act, perverted its definition, and threatened—had it become accepted—to circumscribe the extent of lands deemed qualified for designation.

The Forest Service's fundamental misunderstanding—intentional or not—began at the highest levels, exemplified in 1968 Senate testimony of Chief Edward P. Cliff on the proposed Mount Jefferson Wilderness in Oregon. Citizen groups advocated that Congress override the agency's recommendation to exclude Marion Lake and its surroundings, which would have left a deep indentation in the western boundary of the narrow wilderness area. Chief Cliff resisted, pointing to growing public use of the area:

It is not an untrammeled area. It is being heavily trammed, and we need to get in there and provide sanitation facilities, and water and fire grills, and other recreational improvements, to accommodate the use that is already being made there, and to protect the resources of the area.⁸

Contrary to Cliff's statement, an "area" cannot be "trammed" in the sense he sought to convey. The act applies the word *untrammeled* not to an "area" or its present condition, but to "the earth and its community of life," that is, to the forces of Nature. Both the formal legislative history of the Wilderness Act (in the limited sense a judge or legal scholar

would use) and the history of Zahniser's word choices as its draftsman provide clear guidance on the intended meaning of the word *untrammelled* and its function in the act's carefully designed structure. The congressional champions of the act, abetted virtually every step of the way by Zahniser, went to great pains through eight years of hearings, debates, and committee reports to make their intent clear. Looking back, the leading Senate opponent of the act, Senator Gordon Allott (R-CO) confirmed: "...there is not a word in the Wilderness Act which [was] not scanned, perused, studied and discussed by the committee. Perhaps there is no other act that was scanned and perused and discussed as thoroughly as every sentence in the Wilderness Act."⁹

The ideal of wilderness for the future of wilderness

As the draftsman, Zahniser was careful to avoid having the ideal definition of wilderness focus on the present physical or ecological condition of an area of land, or its land-use history. He chose *untrammelled* as the uniquely best word to express a forward-looking perspective about the *future* of land and ecosystems: once designated, wilderness is to be allowed to express its own will—with the forces of Nature untrammelled into the future.¹⁰

This is just how Congress has applied the definition. For example, during the controversy in the early 1970s over whether once-disturbed areas on national forests in the East could be designated under the Wilderness Act definition, then-Senator James L. Buckley (R-NY), a member of the Senate Interior Committee, expressed a view consistent with Zahniser's:

Of course, we begin from the ideal, just as the Wilderness Act does. But, if we are to have a national system of wilderness areas, as the drafters of the Wilderness Act obviously intended, less than pristine standards would be necessary for practical application. As a basis for public policy I believe it would be a mistake to assume that the Wilderness Act can have no application to once-disturbed areas.¹¹

Zahniser's precision in choosing the word *untrammelled* is well documented. As he worked with congressional staff to refine the Wilderness Bill for reintroduction in 1959, several conservation colleagues urged him to drop the word. One asserted that this word was "hackneyed, relatively meaningless."¹² Another commented that *untrammelled* was a "remnant negative now never used in its positive sense," and that a word in current usage should be substituted—he suggested the word *undisturbed*.¹³

To these entreaties, Zahniser replied that he had chosen the word *untrammelled*, when drafting the bill in the spring of 1956, only after "dissatisfaction with almost every other word that had been suggested," and that he selected it as "a word that fitted our need both as to denotation and connotation."¹⁴ He explained why the word *undisturbed* did not express his intent:

The problem with the word "Disturbed" (that is, "Undisturbed") is that most of these areas can be considered as disturbed by the human usages for which many of them are being preserved; that is, temporarily disturbed. *The idea within the word "Untrammelled" of their not being subjected to human controls and manipulations that hamper the free play of natural forces is the distinctive one that seems to make this word the most suitable one for its purpose within the Wilderness Bill.*¹⁵

A close confidant of Zahniser's on these questions was Harvey Broome, a founder of The Wilderness Society and an attorney. In a 1966 letter, Broome recalled that:

Zahniser and I had this matter up about five years ago when the Forest Service was proposing a heavily [logged-over and] burned-over area in North Carolina as part of the Shining Rock wilderness area. We concluded that under the definition in the Bill, as then drafted, there was no conflict provided roads and mechanical and other uses were prohibited. Congress apparently accepted the same understanding since the Shining Rock Wild Area was incorporated in the wilderness system....¹⁶

Distinguishing the ideal and practical definitions

The context in which *untrammelled* is used in the Wilderness Act is all-important, for it circumscribes how Congress intended the word (and the entire sentence) to function in the structure of the act. The word appears in the first of two sentences in subsection 2(c) of the act. Congress (and Zahniser) intended each sentence to have a distinct definitional purpose—the first states the *ideal* while the second is the more *practical* characterization. Yet, intentionally or not, the Forest Service initially acted as if there were no such distinction.

In its written response to questions raised during the 1967 Senate hearing on the proposed San Rafael Wilderness—the first area added to the wilderness system after enactment of the Wilderness Act—the Forest Service asserted that:

the law describes wilderness, in part, as "...an area where the earth and its community of life are untrammelled by man..." which is "...managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature..."¹⁷ [ellipses in original]

Compare this assertion of how the law describes wilderness with the actual words and punctuation of subsection 2(c) of the act and the sleight of hand becomes obvious; they mashed into one the two distinct sentences Congress deliberately separated in order to serve two different functions.

Commenting on the two-part structure of the definitions during the final Senate hearing in 1963, Zahniser noted that:

In this definition the first sentence is definitive of the meaning of the concept of wilderness, its essence, its essential nature—a *definition that makes plain the character of lands with which the bill deals, the ideal*. The second sentence is descriptive of the areas to which this definition applies—a listing of the specifications of wilderness areas; it sets forth the distinguishing features of areas that have the character of wilderness.... *The first sentence defines the character of wilderness, the second describes the characteristics of an area of wilderness.*¹⁸

We need not rely solely on Zahniser's expression of intent, for the formal legislative history repeatedly emphasizes Congress's intention to distinguish between two very distinct functions for the two sentences in subsection 2(c).

The first of these sentences originated in the Wilderness Bill introduced in the Senate on June 7, 1956.¹⁹ Slight word changes were made elsewhere in that sentence, but the clause embracing the word *untrammelled* did not change over the ensuing eight years. However, changes were made to the structure of the subsection around it, and these further clarified the function Zahniser and the sponsors intended from the outset.

What Congress intended in the definition of wilderness

When he introduced the original Wilderness Bill, Senator Hubert Humphrey (D-MN) included a detailed section-by-section interpretation of the bill in his introductory speech. He stated: "The opening section defines the term 'wilderness' both in the abstract and as used specifically in this bill..."²⁰

In 1960 Senator James Murray (D-MT) reintroduced a refined version of the Wilderness Bill intended "to clarify and revise the measure" on the basis of earlier hearings, agency comments, and committee discussions.²¹ As the new lead sponsor and as chairman of the Senate committee handling the bill, his explanation is the authoritative expression of legislative intent, includ-

Whatever level of ecological "purity" characterizes portions of an area when it is designated, each is to be managed thenceforth toward the wilderness ideal.



ing why he added what became the second sentence in the subsection enacted four years later. Murray explained to the Senate: "The added detail in the definition of wilderness is in response to requests for additional and more concrete details in defining areas of wilderness."²² The new second sentence Murray added was:

An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land without permanent improvements or human habitation which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a rugged, primitive, and unconfined type of outdoor recreation; (3) is of sufficient size as to make practicable its preservation and use in an unimpaired condition, and (4) may also contain ecological, geological, archeological, or other features of scientific, educational, scenic, or historical value.²³

As distinct from the abstract, ideal definition, this second sentence defines what Jay Hughes called "institutional wilderness"—specific areas of land that "society has called 'wilderness' in terms of definitely bounded, named, managed, and legally identifiable tracts of public land."²⁴ The bill's congressional sponsors repeatedly emphasized that the two sentences serve two distinct functions.

In 1961, Senator Clinton P. Anderson (D-NM) succeeded Murray as chairman of the Senate committee and lead sponsor of the Wilderness Bill. In opening hearings that year, he explained his interpretation in a detailed section-by-section analysis:

Section 2(b) contains two definitions of wilderness.²⁵ The first sentence is a definition of pure wilderness areas, where "the earth and its community of life are untrammelled by man...." It states the ideal.

The second sentence defines the meaning or nature of an area of wilderness as used in the proposed act: A substantial area retaining its primeval character, without permanent improvements, which is to be protected and managed so man's works are "substantially unnoticeable."

*The second of these definitions of the term, giving the meaning used in the act, is somewhat less "severe" or "pure" than the first.*²⁶

The Senate passed the Wilderness Bill twice, in 1961 and in the following Congress, in 1963. On both occasions, the formal reports of the Committee on Interior and Insular Affairs²⁷ included a section-by-section analysis, which noted the nature of the two-part definition:

Section 2(b) defines wilderness in two ways: First, in an ideal concept of wilderness areas where the natural community of life is untrammelled by man, who visits but does not remain, and second, as it is to be considered for the purposes of the act: areas where man's work is substantially unnoticeable, where there is outstanding opportunity for solitude or a primitive or unconfined type of recreation, which are of adequate size to make practicable preservation as wilderness, and which may have ecological, geological, or other scientific, educational, scenic, and historical values.²⁸

Representative John P. Saylor (R-PA) was the original sponsor and leading champion of the Wilderness Act in the House of Representatives. He explained the distinction between the two definitional sentences in his analysis as he introduced a refined version of the Wilderness Bill on November 7, 1963:

Section 2(b) defines wilderness in three sentences.²⁹ The first states the nature of wilderness in an ideal concept of areas where the natural community of life is untrammelled by man, who visits but does not remain. The second sentence describes an area of wilderness as it is to be considered for the purposes of the act—areas where man's works are substantially unnoticeable....³⁰

AS TRACED HERE, *every one* of the lead sponsors of the Wilderness Act explicitly intended the first sentence of subsection 2(c) to express the "abstract" (Humphrey) or "ideal" (Anderson, Saylor), distinct from the "more concrete details in defining areas of wilderness" (Murray) which are spelled out in the second sentence.

As Zahniser had noted in 1949, it was important to recognize that the same word "wilderness" is used both as a description and as a designation. The two-part definition in the Wilderness Act follows that distinction. Of course, the distinction between an ideal definition and a less-than-ideal set of details for practical implementation was and is common.³¹

The non-degradation principle in wilderness stewardship

Given the precise word choices and the care taken in structuring the two-sentence definition in the Wilderness Act, it is beyond dispute that:

- Designation questions of whether a specific area of land meets the definition of wilderness in the act are *not* about whether that land is "untrammelled" (or untrampled). The word *untrammelled*, which applies once an area is des-

ignated, appears only in the “pure,” “ideal” definition that serves a quite different function in the act. For its part, the Forest Service correctly defines untrammeled in the current version of the Forest Service Manual.³²

- The *only* criteria for designation of an area is the “somewhat less ‘severe’ or ‘pure’” (Anderson) defining details set forth in the second, non-ideal definition “for the purposes of the act.” A number of very clear qualifiers—“*generally* appears to have been affected *primarily* by the forces of nature, with the imprint of man’s work *substantially* unnoticeable”—provide practical, workable criteria for entry of areas into the National Wilderness Preservation System. This is how Congress intended and has consistently applied the Wilderness Act, and it is how a federal judge read it as well, in one of the few cases where these issues arose.³³
- The ideal definition has an equally important, but different function; it is not mere congressional poetry, for the canons of statutory interpretation forbid such an interpretation.³⁴ The function of this sentence—with its careful use of the word *untrammeled*—is to define the “ideal” (Anderson), the “essence” (Zahniser) of the wilderness character it is the duty of conservationists and land managers to protect.

There is a supreme logic to this careful structure of the two definitions. Applying the practical criteria of the second sentence in subsection 2(c), the 1964 act itself designated numerous areas with a fading history of the “imprint of man’s work,” and many others have been designated in subsequent acts of Congress. But, however less-than-pure such areas may have been when designated, once designated, the command of the act is to preserve the “wilderness character” of each area, restraining human influences in order that the earth and its community of life are untrammeled by man.

This is, at its heart, a non-degradation principle. Just as the non-degradation principle in the Clean Air Act does not allow polluting purer air down to minimum-level, health-based air quality standards, but requires that areas of pristine air quality be protected, so the acceptance of past human imprints and disturbances in some lands being designated as wilderness does not mean such imprints and disturbances may therefore be allowed to invade other, wilder wilderness lands already designated.³⁵ Whatever level of ecological “purity” characterizes portions of an area when it is designated, each is to be managed thenceforth toward the wilderness ideal.

Zahniser was adamant that “management” of the ecosystem in each wilderness area should occur almost entirely by restraint on human influences from its boundaries, rather than by manipulation within. He gave us his admonition about wilderness management in the epigrammatic title he chose for an editorial in *The Living Wilderness* in 1963: “Guardians Not Gardeners.” The guardian philosophy, he wrote, is one of “protecting areas at their boundaries and trying to let natural forces operate within the wilderness untrammeled by man.”³⁶ A federal judge, writing in 1975, echoed Zahniser’s analogy: “Nature may not always be as beautiful as a garden but producing gardens is not the aim of the Wilderness Act.”³⁷

By stating the ideal of “pure wilderness,” its “essential nature,” Zahniser’s ringing first sentence of subsection 2(c) breathes ecological life into the phrase “wilderness character.” He and the Congress thus set the goal toward which our stewardship of wilderness areas is to strive: To free Nature within these special places, as best we can, from the fetters and trammels of man’s influence, so that wilderness may be—through our own self-restraint—areas “where the earth and its community of life are untrammeled by man.” ☾

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NOTES

1. The broad history of this evolution in wilderness concepts and policy is traced in my recent Pew Wilderness Center Briefing Paper: Douglas W. Scott, 2001, *A wilderness-forever future: A short history of the National Wilderness Preservation System* (Washington, D.C.), which is available at www.pewwildernesscenter.org. See also: Aldo Leopold, 1921, The wilderness and its place in forest recreational policy, *Journal of Forestry* 19(7): 720; Robert Marshall, 1930, The problem of the wilderness, *The Scientific Monthly* (February): 148; Marshall (undated), Preliminary statement on terminology, suggested definitions of outdoor recreational areas, attached to Minutes of the Second Meeting of Recreation Committee, February 11, 1936, Natural Resources Committee, copy in author’s files; C. Frank Keyser, 1949, The preservation of wilderness areas: An analysis of opinion on the problem, Subcommittee on Wildlife and Fisheries Conservation, Committee on Merchant Marine and Fisheries, U.S. House of Representatives, Committee Print 19, August 24; and Wildland Research Center, 1962, *Wilderness and recreation: A report on resources, values, and problems*, a report to the Outdoor Recreation Resources Review Commission (Washington, D.C.: Government Printing Office): esp. 25–26.
2. Zahniser, 1949, A statement on wilderness preservation in reply to a questionnaire, March 1. Reprinted in *National Wilderness Preservation Act*, hearings before the Senate Committee on Interior and Insular Affairs (85th Congress, 1st session) on S. 1176, Washington, D.C., June 19 and 20,

- 1957: 169. Zahniser returned to this point during discussions at the Sierra Club's 2nd Biennial Wilderness Conference in 1951: "Howard Zahniser thought the use of the same word, 'wilderness,' for both recreational and land-management problems (which are not the same) must be confusing; but even if we are not yet ready to restrict ourselves with too strict a definition, we must not lose sight of the necessity of preserving primeval environment, freedom from mechanization, a sense of remoteness, and those characteristics that impress visitors with their relationship to nature." Sierra Club, 1964, Summaries of the "Proceedings of the First Five Biennial Wilderness Conferences," in *Wildlands in our Civilization* (San Francisco: Sierra Club), 144.
3. The legislative history and precedents relating to designation criteria for wilderness are reviewed in my article, 2001, Congress's practical criteria for designating wilderness, *Wild Earth* 11(1): 28–32. A series of Pew Wilderness Center Briefing Papers provides detail on legislative history and precedents for many topics involved in wilderness designation and management; see www.pewwildernesscenter.org. I welcome inquiries about issues and precedents not yet covered in this series, as well as suggestions of precedents I may have missed.
 4. Now renamed the Committee on Resources.
 5. U.S. House, 1983, *California Wilderness Act of 1983*, H. Rept. 98-40 (98th Congress, 1st session), March 18: 43.
 6. Wilderness Act, 1964, *U.S. Code* Vol. 16, sec. 1132(c).
 7. Webster's 1913 unabridged dictionary defines *untrammelled* as "Not hampered or impeded; free." The transitive verb form derives from the noun antonym, "trammel." The online dictionary Wordsmyth provides considerable additional detail. Here is a condensation of the full Wordsmyth entry found at www.wordsmyth.net:
 TRAMMEL PART OF SPEECH NOUN Definition 1. (usu. pl.) a restraint or impediment to free movement. Definition 2. a restraint used on a horse's feet to teach it to amble; fetter. Definition 3. a device used to gauge and adjust the alignment of machinery parts; tram. Definition 4. a net for catching fish or wild birds.
 PART OF SPEECH TRANSITIVE VERB Inflected Forms *trammelled, trammeling, trammels*. Definition 1. to impede, restrict, or confine; hobble. Definition 2. to ensnare with, or as if with, a net. Related Words *encumber, enthrall, confine, circumscribe, shackle, enslave, limit*.
 8. Statement of Edward P. Cliff, 1968, Chief, Forest Service, *San Gabriel, Washakie, and Mount Jefferson Wilderness Areas*, hearing before the Senate Subcommittee on Public Lands, Committee on Interior and Insular Affairs (90th Congress, 2d session) on S. 2751, February 19: 11. Congress did designate Marion Lake as part of the wilderness established in 1968.
 9. U.S. Senate, 1972, Committee on Interior and Insular Affairs, hearings on designation of wilderness areas, S. 2453 and related wilderness bills (92nd Congress, 2d session) May 5: 64.
 10. A contrary view was expressed eight years after the enactment of the Wilderness Act by one of Zahniser's coworkers on the Wilderness Bill, Joe Penfold, conservation director of the Izaak Walton League of America: "A crucial point is that every effort made by conservationists in the half century leading to the Wilderness Act was premised on obtaining recognition and acceptance of wilderness as a natural ecosystem, untrammelled by man *in the past* and permitted to continue untrammelled and undisturbed by man's activities *in the future*." J. W. Penfold, 1972, Wilderness east—A dilemma, *American Forests* 78(4): 24 (emphasis in the original). This idea of statutory wilderness being limited to natural ecosystems "untrammelled by man *in the past*" was not, contrary to Penfold's after-the-fact assertion, ever used by Zahniser, who disclaimed exactly that idea, as documented here.
 11. *Congressional Record*, 1973, January 11: 757. Buckley is now a senior judge on the Federal Court of Appeals for the D.C. Circuit. The history of the eastern wilderness controversy is told by James Morton Turner, 2001, Wilderness east: Reclaiming history, *Wild Earth* 11(1): 19–27.
 12. C. Edward (Ned) Graves, 1959, letter to Howard Zahniser, February 13, quoting Philip Hyde, Wilderness Society files and author's files.
 13. Weldon F. Heald, 1959, letter to C. Edward Graves, February 12. Wilderness Society files and author's files.
 14. Howard Zahniser, 1959, letter to C. Edwards Graves, April 25. Wilderness Society files and author's files.
 15. Howard Zahniser, 1959, letter to C. Edwards Graves, April 25 (emphasis added).
 16. Harvey Broome, 1966, letter to Robert W. Jasperson, September 10. Papers of The Wilderness Society, 7: 173 (Tennessee: Great Smoky Mountains National Park), Denver Public Library. I am grateful to James Morton Turner who found this correspondence and called it to my attention. It supplements the history of Broome's role in on-the-ground assessing of the qualification of the Shining Rock Wilderness provided in my article, 2001, Congress's practical criteria for designating wilderness, *Wild Earth* 11(1): 28–32.
 17. Unsigned letter, 1967, from the Forest Service to Hon. Frank Church, April 26, reprinted in *San Rafael Wilderness*, hearings before the Senate Subcommittee on Public Lands, Committee on Interior and Insular Affairs (90th Congress, 1st session) on S. 889, April 11: 81.
 18. Howard Zahniser, 1963, Executive Director of the Wilderness Society, supplementary statement in *National Wilderness Preservation Act*, hearings before the Committee on Interior and Insular Affairs, United States Senate (88th Congress, 1st session), on S. 4, February 28 and March 1: 68 (emphasis added).
 19. U.S. Senate, 1956, Subsection 1(c) of S. 4013, 84th Congress, 2nd Session.
 20. Sen. Hubert Humphrey, 1956, Wilderness preservation, *Congressional Record*, June 7. The cited version is from page four of a booklet reprint of Senator Humphrey's speech and the text of the bill, which was printed for widespread distribution by Humphrey and The Wilderness Society.
 21. Sen. James Murray, 1960, *Congressional Record*, July 2: 14453.
 22. Murray, 1960, 14454.
 23. This is the second sentence of subsection 1(d) of Murray's bill, S. 3809; it became subsection 2(c) of the final act. This wording was somewhat modified between 1960 and enactment of the act in 1964, but not in any material way. *Congressional Record*, 1960, July 2: 14455.
 24. Jay Melvin Hughes, 1964, Abstract of wilderness land allocation in a multiple use forest management framework in the Pacific Northwest, unpublished Ph.D. dissertation (East Lansing: Michigan State University), quoted in Ronald Lee Stewart, 1968, The Wilderness Preservation Act, unpublished master's thesis (Eastern New Mexico University): 48.
 25. This became subsection 2(c) of the act.
 26. Sen. Clinton P. Anderson, 1961, in *Wilderness Act*, hearing before the Senate Committee on Interior and Insular Affairs (87th Congress, 1st session) on S. 174, February 27–28: 2, emphasis added.
 27. Now renamed Committee on Energy and Natural Resources.
 28. U.S. Senate, 1963, S. Rept. No. 88-109, April 3: 7–8. Subsection 2(b) referred to here became subsection 2(c) in the act.
 29. This subsection, which became 2(c) of the act, ended up comprised of only two sentences.
 30. Rep. John P. Saylor, 1963, *Congressional Record*, November 7: 20354. Saylor's remarks came as he introduced H.R. 9070, the version of the Wilderness Bill that became the vehicle for House passage of the act the following summer.
 31. For example, "all men are created equal," says the ideal in our Declaration of Independence, leaving the less-than-ideal details—no equality for women, no equality for slaves—to our pre-amendment U.S. Constitution.
 32. The Forest Service Manual provisions on wilderness management define *untrammelled*. "In the context of the Wilderness Act, an untrammelled area is where human influence does not impede the free play of natural forces or interfere with natural processes in the ecosystem." Forest Service Manual 2320.5(2). For this and the entire manual chapter concerning wilderness management, see www.wilderness.net/nwps/policy/fs_manual_policy.cfm.
 33. *Parker v. United States*, 1970, 309 F.Supp. 593, U.S. District Court for the District of Colorado, Memorandum Opinion and Order, February 27. This is the "East Meadow Creek" decision that assured protection of roadless lands contiguous to national forest "primitive areas" until Congress completed the review of each of those areas as required by the Wilderness Act.
 34. "It is, of course, a cardinal rule of statutory construction that effect should be given to every provision of a statute." Court of Appeals for the 10th Circuit, 448 F.2d 797.
 35. The "prevention of significant deterioration of air quality" (PSD) provisions of the Clean Air Act prevent clean air areas from being polluted to the worst levels allowed by the health-based National Ambient Air Quality Standards. *U.S. Code* Vol. 42, secs. 7470–7492 (Part C, Title I).
 36. Howard Zahniser, 1963, Guardians Not Gardeners, *The Living Wilderness* 83: 2.
 37. *Minnesota Public Interest Research Group v. Butz*, 1975, 401 F.Supp. 1276, esp. 1331, U.S. District Court for the District of Minnesota, Memorandum and Order, August 13. This is one of several court opinions concerning logging in the Boundary Waters Canoe Area.

For the Permanent Good of the Whole People

By Ed Zahniser, Ninth Annual Wilderness Rangers Training Workshop Address, Aspen, Colorado, May 2001

The history of the passage of the 1964 Wilderness Act is commonly taken to be an eight-year legislative struggle. The first Wilderness Bills were introduced in Congress in 1956, in the House of Representatives by John P. Saylor of Pennsylvania and in the Senate by Hubert H. Humphrey of Minnesota. The Wilderness Act was signed into law by President Lyndon B. Johnson on September 3, 1964. My mother, Alice Zahniser, who also will speak to you this afternoon, stood at the White House for the signing, and President Johnson gave her a pen he used. All I ever got from President Johnson was a letter telling me to appear for induction into the U.S. Army.

What I would like to offer you is not an eight-year legislative history, but a deeper glimpse of Wilderness Act history. I would like to offer you a few touchstones of the history of the American wilderness imagination. I want to do this because I believe that, as a wilderness ranger in 2001, you have actually been imagined onto the land. You have been projected onto the land by the wilderness imagination of a great cloud of witnesses that has come before you. You have been projected into the wilderness by the imagination of a great cloud of witnesses that not only has come before you, but, I believe, also goes before you as you allow the wilderness to accept you into itself this summer. This is why I feel so honored to be here with you. Yours is a journey this summer most rare in our culture.

The history of the realization of a Wilderness Act is really a 100-year struggle, from 1864 to 1964. Two events in 1864 begin a history of the Wilderness Act. The first event is President Abraham Lincoln's taking time away from the prosecution of the Civil War to sign an act ceding certain federal public domain lands of Yosemite Valley and the Mariposa Grove of Big Trees—Giant Sequoia trees—to the state of California as public parklands.

The other event is the publication of George Perkins Marsh's book Man and Nature. This is the book that historian and planner Lewis Mumford, in the mid-20th century, deemed the fountainhead of the American conservation movement. The subtitle to Marsh's book is "The Earth as Modified by Human Action." The Earth as Modified by Human Action. The verb form of that word, to modify, makes it into the opening paragraphs of the Wilderness Act. This was no accident. My father, Howard Zahniser, the chief architect of the 1964 Wilderness Act, was a keen student of the beginnings of American concern for wilderness. Zahnise, as he was known by friends and associates, knew to begin at the beginning, and we should too.

What the Vermont-born George Perkins Marsh achieved in his great work Man and Nature was a historical synthesis of global assaults on forests by humankind. The book is still in print today. It has never been out of print. It went through something like seven printings by about 1873. Marsh wrote it in Italy, where President Lincoln had posted him as a diplomat. Marsh had witnessed the destruction of Vermont's forests in his own lifetime. But it was Marsh's travels in the Mediterranean Basin that enabled him, gradually, to see the potential disaster in America's wanton destruction of our forests. But Marsh's awakening was not instant insight. It was gradual.

In 1856, Marsh and his wife had traveled in North Africa, on the southern side of the Mediterranean Basin. Marsh had been sent to North Africa by Jefferson Davis, who was U.S. Secretary of War then. Ironically, as Marsh was writing Man and Nature, Jefferson Davis was president of the Confederate States of America.

Jefferson Davis had asked Marsh to study the camel, which the U.S. Army was interested in using to fight American Indians in the Southwest. In North Africa, Marsh realized that many desert areas he and his wife traversed had once been the sites of great civilizations founded on great forests that harbored elephants, not camels.

But it did not hit Marsh full-face just then. In fact, Marsh's 1856 book, The Camel, opens with the prevailing notion of that time, which was that humans were not capable of significant impacts on God's creation. But then Marsh was posted to Italy by Abraham Lincoln. His travels there convinced him that the formerly great civilizations of the northern Mediterranean Basin, such as Greece, had also declined when their forests were cut down,

just as Marsh had witnessed the forests of his home state of Vermont devastated. So, the subtitle of Marsh's 1864 book Man and Nature, "The Earth as Modified by Human Action," was both actually and metaphorically a watershed event for Marsh's thinking. Forests were keepers of watersheds.

The text of the Wilderness Act begins: "An Act / To establish a National Wilderness Preservation System for the permanent good of the whole people, and for other purposes. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled." And the text quickly moves to the statement of policy, Section 2 (a) "In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness."

Hear those phrases "does not occupy and modify all areas . . . leaving no lands designated for preservation and protection in their natural condition . . . ?"

In its broadest sweep, the Wilderness Act is a statement of social ethics. It is about restraint and humility. It is about heeding this warning about forest values George Perkins Marsh articulated 100 years earlier, in 1864. The Wilderness Act is about restraint and humility for what we do not know about the land organism . . . about which Aldo Leopold wrote, as I'm sure Buddy Huffaker of the Aldo Leopold Foundation will share with us this week. Restraint and humility for what we do not know about the land organism.

As acid rain, acidic deposition, has forced us to understand soil relationships, we find in soils the same spiraling downward of complexity that the Hubble space telescope finds spiraling outward as the complexity of the universe or multiverse. Tachyons, which may be the same as neutrinos, for example, have a mass that is imaginary. Isn't that luscious science?

And what about these opening lines? "An Act / To establish a National Wilderness Preservation System for the permanent good of the whole people . . ." For the permanent good of the whole people.

I commend to your repeated close reading the text of the Wilderness Act. It makes its own best case for the wilderness stewardship and education entrusted to you on the land this summer.

I have belabored this conservation history and the work of George Perkins Marsh—this 100-year history of the realization of a Wilderness Act—to show that wilderness preservation was not a new idea in the 1950s. Wilderness preservation as a vision for the future of federal public lands has been around a long time.

Directly across Lake Champlain from the Vermont of George Perkins Marsh, the Adirondack Mountains region of New York State testifies to Americans' long-standing concern for wildlands. In 1872, the people of New York State began to move to create an Adirondack State Park. Their motivation is not difficult to discern. In 1871, New Yorkers suddenly found themselves net importers of wood fiber for the first time ever. Heeding Marsh's warnings in Man and Nature, New Yorkers, in 1872, moved to protect their remaining forests. New Yorkers, in 1872, moved to protect the watershed that supplied the Erie Canal with water.

Then, in 1885, New Yorkers created, on the state-owned lands of the Adirondack and Catskill state parks, the State Forest Preserve lands. And then, in 1894, New Yorkers inserted into their state Constitution the so-called "forever wild" clause. The clause says that those forest preserve lands will be kept "forever as wild forest lands."

One voting member of that 1894 Constitutional Convention was a lawyer, Louis Marshall. Louis Marshall was a great champion of Jewish civil liberties, immigrant rights, and the rights of all minorities. And Louis Marshall led the floor fight at the 1915 New York State Constitutional Convention that stopped a move to gut the "forever wild" clause. In wilderness preservation history, Louis Marshall is also known as the father of Robert Marshall, the indefatigable Bob Marshall who was to labor within the U.S. Forest Service to protect forest wilderness. We are most fortunate to have Bob Marshall's nephew Roger Marshall here this week. Roger's father George Marshall was the very first person to whom my father Howard Zahniser sent the very first draft of a Wilderness Bill.

So, your agency's own Bob Marshall, who would also organize The Wilderness Society, was a second-generation wilderness advocate. Wilderness preservation has been around a long time. The roots of Wilderness Act history go deep.

I expect that my mother, Alice Zahniser, will tell you how much the Adirondacks influenced my father and our family. She will begin her annual summer stay there in July. And Bob Marshall and his parents and siblings cut their wilderness eyeteeth in the Adirondacks.

The Adirondacks and Catskills still preserve, in their "forever wild" lands of the state forest preserve, the wildlands-protection impetus that led to the creation of Forest Reserves on the federal public domain lands. However, the Forest Reserves, which were true reserves, in which logging, mining, grazing, and homesteading were prohibited, were subsequently redesignated as national forests open to logging, mining, and grazing.

So New Yorkers, in a sense, were able to make stick, in their own backyard, a wildlands preservation impulse that conservationists like John Muir and Robert Underwood Johnson could not make stick on the federal public lands. In an address to members of the New York State legislature in the 1950s, my father called the Adirondack and Catskill forest preserve "Where Wilderness Preservation Began."

I hope you will tuck this bit of Wilderness Act history into your mental backpack for your all-important wilderness rangering work this summer. The Wilderness Act is for the permanent good of the whole people. Isn't that wonderful? That's the Congress of the United States speaking. The House vote on the Wilderness Act was 373 to 1. The lone dissenting vote was cast by a member from Texas.

I mentioned that the Wilderness Act is an ethical statement about our human relations with what Aldo Leopold called the land organism. In fact, wilderness has a long, long tradition in Judeo Christian thought, of being prophetic of human culture. By "prophetic," I do not mean predicting the future. Prophetic, rather, means a calling back to fundamental, right relationships. Wilderness has been the location for calling people back to right relationship both with the rest of the human community and with God. The wilderness sojourn of the Hebrew people fleeing 400 years of slavery in Egypt under the Pharaoh is reported in the Hebrew Scriptures' Book of Exodus.

Biblical scholar Walter Brueggemann says that the wilderness experience of the Hebrew people, as codified in their scriptures, furnished the building blocks of their national identity. The wilderness experience gave them their laws. The wilderness experience gave them the name of God. Other scholars echo Brueggemann's assessment. As the Biblical scholar Ulrich Mauser reads the New Testament Gospel of Mark, the ministry of Jesus embodies a new Exodus wilderness experience. In Mauser's reading of Mark's Gospel, Jesus of Nazareth works out highlights of his ministry in the wilderness, atop mountains, or on or by the sea.

In the language of modern psychology, Jesus works out highlights of his ministry in these natural settings known to produce the diminutive effect. These are wild settings that, like Gothic cathedrals, put us in spatial perspectives that impress on us our proper scale in the universal scheme of things.

Wilderness experience calls us back to what my father described as a sense of dependence and interdependence as well as independence. Wilderness experience calls us back to a right relationship with what my father called the whole community of life on earth that derives its existence from the sun. Wilderness experience calls us back to the realization that, as my father wrote, we prosper only as the whole community of life prospers.

Novelist Andrew Lytle writes that prophets do not come from the city promising riches and wearing store-bought clothes. No, prophets have always come from the wilderness, stinking of goats . . . and telling of a different sort of treasure. Wendell Berry writes that "If change is to come, it will come from the margins. . . . It was the desert, not the temple, that gave us the prophets." And in much original Hebrew scripture the words for desert and wilderness are the same word.

This prophetic role of wilderness experience — how wilderness calls us back to right relationship, to right living, to social justice — this prophetic role of wilderness also figures strongly in the history of the Wilderness Act.

To begin at the beginning of this important aspect of Wilderness Act history, we must step back, as my father did, we must step back before George Perkins Marsh and 1864, back to the 1830s, back to the era of the Transcendentalist reformers. We must step back to the Transcendentalists Margaret Sarah Fuller, Ralph Waldo Emerson, and Henry David Thoreau.

Zahnie was a lifelong student of Emerson and Thoreau. He served a one-year honorary term as president of the Thoreau Society from 1956 to 1957. One of my father's public school teachers had her students memorize an Emerson quotation every week. My father's interest eventually shifted more to Thoreau, who has since perhaps eclipsed his friend and mentor Emerson in the popular imagination. It was of course Thoreau who, in his 1862 essay on "Walking," inscribed the Zen koan-like rallying cry of conservation that ". . . in Wildness is the preservation of the World."

In his book of American scripture, Walden, in his posthumous books Cape Cod and The Maine Woods, and in his millionous well-polished words of Journals, Thoreau meditates—as perhaps no one else has—on the utter necessity of wildness. Thoreau's essay "Walking" actually combines two lyceum lectures he gave in the 1850s, one titled "The Wild," and one "Walking." Both lectures were drawn from Thoreau's journals.

And isn't it intriguing how Thoreau does not say we preserve wildness. He says wildness preserves the world? And for Thoreau, who read French, German, Latin, and Greek, this word world is actually the Greek word kosmos, meaning not only world but also beauty, pattern, order . . . in Wildness is the preservation of the World, Beauty, Pattern, Order.

Until the recent resurgence in women's studies, Margaret Sarah Fuller was far less known than Emerson and Thoreau. But many now credit Fuller as the greatest of Transcendentalist thinkers. (She was the great aunt, by the way, of R. Buckminster "Bucky" Fuller.) Many consider Margaret Fuller's book Woman in the Nineteenth Century to be, still, the best statement on that subject. She edited the Transcendentalist magazine The Dial. She was the first female book reviewer for a New York newspaper, and she was a thoroughgoing reformer. Fuller even went to Europe to take part in the Italian revolution. She died tragically, early, in a shipwreck just off the U.S. east coast on her way back to America. Emerson asked Thoreau to go search for her body and personal effects. None were found.

Margaret Fuller is important to our Wilderness Act history because her reformist agenda in the 1840s has an uncanny, almost one-to-one correspondence with the legislative agenda of Hubert H. Humphrey in the 1950s. Fuller advocated American Indian rights, ending slavery, women's suffrage, women's rights, education reform, rehabilitation of women prisoners, and more. Her Transcendentalist reform agenda and Senator Humphrey's legislative agenda, of which the Wilderness Act was one important element, show that wilderness is not at the periphery of society. Wilderness is a core concern of a truly whole society, holistically seen.

Fuller's and Humphrey's similar agendas round out the truth of Thoreau's assertion that ". . . in wildness is the preservation of the World." The Wilderness Act was part of a large legislative package backed by Senator Humphrey that included the National Defense Education Loan Act, Voting Rights Act, and the landmark Civil Rights Act. Wilderness and wildness are not at the periphery of a truly great society. They are at its core.

It is also not well known that Bob Marshall not only fought for access to wilderness as a minority right. Bob Marshall also fought for a fair shake for labor and other social justice issues. On Marshall's death in 1939, one-third of his estate effectively endowed the Wilderness Society but two-thirds went to advocate labor and other social justice issues.

So you see the truth of that declaration at the opening of the Wilderness Act, that the Wilderness Act is construed by Congress to be "for the permanent good of the whole people. . ." by a House vote of 373 to 1.

In fact, Howard Zahniser was propelled from a secure job with the federal government into full-time work for wilderness in part by his grave disillusionment over the use of atomic bombs on Japan. If atomic bombs were the culmination of industrial technology, surely we must find a way to relearn the great lesson of our kinship with all life. Surely, we must find some better way to express our true role in the whole community of life on Earth that derives its existence from the Sun.

Wilderness and wildness are integral to what Wendell Berry calls the circumference of mystery. Wilderness and wildness are integral to what Denise Levertov calls the Great Web. Wilderness and wildness are integral to what the Reverend Dr. Martin Luther King Jr. calls our inescapable network of mutuality. Wilderness and wildness are integral to what God describes to Job as the “circle on the face of the deep.” Wilderness and wildness are integral to the biosphere, to that circle of life, which is also this circle of life, our circle of life. Life.

The prophetic call of wilderness is not to escape the world. The prophetic call of wilderness is to encounter the world’s essence, the Earth’s immortal genius, the planetary intelligence. Wilderness calls us to renewed kinship with all of life. We humans will extend ethical regard to the whole community of life on Earth only as we feel that we are a part of that community. In Aldo Leopold’s words, we will enlarge the boundaries of the community, we will live out a land ethic, only as we feel that we are part of that community. By securing a national policy of restraint and humility toward natural conditions and wilderness character, the Wilderness Act has taken us one hugely significant sociopolitical step toward instituting a land ethic, toward enlarging, in humility, the boundaries of the community.

Ralph Swain brought us all together here on purpose—Buddy Huffaker for the Leopold family, Bill Carhart, Roger Marshall, Alice Zahniser. We who are blood family of the American wilderness imagination can glory in seeing the baton pass to you in the very wilderness itself. And you who now go forth as rangers in the larger wilderness family, you can grasp, in a very physical sense, how spiritually connected you are to this great cloud of witnesses that is the American wilderness imagination. You are now this legacy. And so I challenge you this week; I challenge you this summer: Go forth. Go forth into the wilderness. Do good. Tell the stories. And bring back a different sort of treasure . . . for the permanent good of the whole people.

How the Wilderness Was One

By Stewart L. Udall, *American Heritage*, February/March 2000, pp. 98-105

One of this century's profound cultural transformations began in the 1960s, when ecological thought took hold and fostered a new seriousness toward earth stewardship. But what happened then was really a transition. Present day environmentalism represents an elaboration of core ideas developed far earlier by American conservationists, especially the seminal concepts and plans of the two Presidents Roosevelt and their allies. They prepared the way so that Americans later confronted by increasing threats to earth's ecosystems could erect a sophisticated superstructure on ramparts already standing.

Movements that foster ideas that shape the fabric of American thought usually evolve in reaction to abuses that constrict the lives of citizens or threaten the nation's future. The conservation movement came into existence in the first years of this century in response to the unprecedented plunder of public resources in the last three decades of the nineteenth century.

In the forefront of that pageant of destruction and waste was a rapacious lumber industry. Having begun in Maine and swept westward to California's towering groves of redwood trees, the newly mechanized industry clear-cut the bulk of this country's long-leaf pine forests and left blackened wastelands in its wake.

Elsewhere, as the killing power of rifles increased, whole species were slaughtered on a scale the world had never seen. That decimation came to a climax on the Great Plains, where in the space of little more than a decade the vast herds of buffalo—the wildlife wonder of the continent—were nearly exterminated by “market hunters.” In other regions hunters who worked for commercial enterprises conducted relentless raids on edible birds, on fur seals, and on shore and migratory birds whose feathers were in demand. These endless hunts and those conducted for sport exterminated several species of bird and drove kingfishers, terns, eagles, pelicans, egrets, and herons to the brink of extinction.

The slaughters evoked angry protests from some Americans. In 1877 Secretary of the Interior Carl Schurz tried to start a campaign to halt the unfettered felling of the nation's timberlands. A German emigrant familiar with forestry practices of his homeland, Schurz issued a report in which he denounced lumbermen who were “not merely stealing trees, but whole forests.” But his plans to initiate scientific management of the nations resources were thwarted by Congress, and two decades would pass before growing public protest gave reformers an opportunity to push for laws and policies that would change the course of our history.

The man who became the leader of the nascent conservation movement was President Theodore Roosevelt. As a young rancher in what is now North Dakota, Roosevelt had learned what happened when nature's iron laws were ignored. He was a natural born reformer, and when an assassination catapulted him into the White House in 1901, he was ready to lead a crusade for land policies that would alter the values and attitudes of the American people.

The president began by declaring in his first State of the Union address that resource issues were “the most vital internal problems of the United States.” A politician who wore his convictions on his sleeve, he spoke out against “the tyranny of mere wealth” and galvanized a cadre of young foresters by exclaiming, “I hate a man who skins the land.”

Roosevelt chose for his adviser on resource issues the dynamic thirty-six year old chief of the Division of Forestry in the Department of Agriculture, Gifford Pinchot. Pinchot had little power as the head of a tiny new bureau, but his vigorous ideas about land stewardship won him a preferred place at the new President's council table. Roosevelt's crusade needed a motto, a slogan, and Pinchot and his friends soon coined a word that expressed the bundle of ideas that the President was considering. Pinchot and his fellow forester Overton Price had been discussing the fact that government owned forests in British India were called *Conservancies*, and this resonant word was enlarged into the nouns *conservation* and *conservationist*.

Roosevelt and Pinchot had to confront an unsympathetic Congress, and they knew from the outset that to do so they must sell conservation to the American people as well. Roosevelt welcomed this challenge, for he was a superlative teacher and saw himself as the trustee of the nation's resources.

The policies and programs that Roosevelt and Pinchot implemented over the seven years of Roosevelt's Presidency focused on specific issues. They converted idle forest "reserves" into a functioning system of national forests to be managed by a corps of trained foresters. The President won over hostile Western congressmen by supporting a new federal program to build dams and homestead-style irrigation projects in arid parts of the West. He also issued orders that stopped extravagant giveaways of public resources and simultaneously challenged a balky Congress to enact laws that hydropower sites and mineral resources be developed only under federal licenses and leases.

His audacity was what made many of Theodore Roosevelt's landmark conservation achievements possible. In his second term he rewrote the rulebook on presidential power by placing his signature on sweeping Executive Orders and proclamations, rejecting his timid predecessors' "narrowly legalistic view" that the President could function only where a statute told him to, and he plumed the Constitution to find powers for himself. His glory was that he dared to use his pen to change the face of the country's landscape.

Before he left office, he had replaced a century old policy of land disposal with a new policy of setting land aside for conservation. As a result of decisions he made, the lands designated as national forests increased from 42 million acres to 148 million, and 138 new forest areas were created in twenty-one Western states. With additional strokes of his pen, he carved out four huge wildlife refuges and set up fifty-one smaller sanctuaries for birds, to protect what he called "the beautiful and wonderful wild creatures whose existence was threatened by greed and wantonness." With another flourish he established eighteen national monuments, including four—Grand Canyon, Olympic, Lassen Volcanic, and Petrified Forest—so majestic that Congress subsequently converted them into national parks.

Executive action was effective as far as it went, but it was essentially a policy to preserve some of the West's unsullied lands. If resources damaged during the raider years of the nineteenth century were to be renewed and rehabilitated, there would have to be a truly national approach, with a working partnership between the executive and legislative branches of government. Theodore Roosevelt was a splendid preacher-at-large, but few members of Congress were stirred by his rhetoric. Indeed, in the decade after he left office only two significant conservation statutes were passed: the Weeks Act of 1911, which permitted the purchase of forested land at the headwaters of navigable streams, to make possible national forests in the East, and the 1916 measure that created the National Park Service.

However, where conservation was concerned, Roosevelt's influence did not wane after he left Washington; instead it came to a culmination during his third-party Bull Moose presidential campaign in 1912, when he forced his two opponents to compete with him as advocates of reform. Some of the men who were destined to lead the nation in the crisis years of the Great Depression—most notably Harold Ickes, George Norris, Sam Rayburn, and Franklin Delano Roosevelt—first lit their political torches at the bonfire he created in the 1912 presidential election.

His words and deeds left a spacious legacy. The conservation creed he espoused altered the outlook and the values of many Americans, encouraging citizens to form grassroots organizations and influence local and regional political decisions. And the ideals he championed not only changed his country's land-stewardship practices but encouraged other nations to institute comparable programs.

Conservation fell out of favor during World War I and the 1920s. Existing national lands were better managed, but habitat for wildlife continued to shrink, wartime demands for wheat encouraged improvident plowing that would in time transform parts of the Great Plains into dust bowls, and little was done to restore the forestland gutted during the late nineteenth century.

The second wave of the conservation movement was launched when Franklin D. Roosevelt began his New Deal in the demoralizing depths of the Great Depression, when one of every four Americans was unemployed. Roosevelt's experiences as governor of New York had suggested to him that providing conservation jobs for

large numbers of young men would be an effective way to combat unemployment. In his acceptance speech at the 1932 Democratic National Convention, he put conservation in the forefront, announcing “a wide plan of converting many millions of acres of marginal and unused land into timberland through reforestation.”

The Civilian Conservation Corps (C.C.C.), created in the first weeks of his Presidency with nearly unanimous support from Congress, was probably the most effective of all New Deal Programs. The jobs it generated provided dollars for destitute families and gave men valuable skills, and the work itself improved the economic outlook in nearby communities. More land-renewal work went on during Franklin Roosevelt’s first term than at any other time in our nation’s history. Corpsmen build small dams, tackled soil erosion problems, planted more than two billion trees, and built everything from washrooms to grand rustic lodges in national parks. To make the program truly national and provide more jobs, the President extended the East’s new system of national forests, allocating more than thirty-seven million dollars (appropriated by Congress for “public works”) to purchase eleven million acres of wounded, cut-over land. Before the war closed the camps, more than two and a half million young men served in the C.C.C.

Historians overlook the fact that in certain regions the New Deal was at its core a program of resource conservation. Congress, acting in tandem with the President, enthusiastically financed initiatives that ranged from a new Soil Conservation Service to the acquisition of millions of acres of swamps, lakes, and sub-marginal farmlands, enlarging the nation’s sanctuaries for migratory birds and wildlife.

The building of dams and hydroelectric plants was also a hallmark of the era. Construction of the world’s then-highest dam on the Colorado River (a huge federal project that moved ahead on schedule through the darkest years of the Depression) reflected the belief that floods should be controlled and the high energy potential of the nation’s rivers “harnessed,” as the then ubiquitous expression went. Dam building was ultimately carried to extremes, but the electricity dams generated fed a program that produced enormous benefits for tens of millions of Americans, the Rural Electrification Administration, which began in 1935.

At the time, nine-tenths of the thirty million people who lived in rural America did not have electric power. The REA law underwrote the formation of local electric cooperatives and provided low-interest loans to extend transmission lines into the countryside. In a few years the program had raised the standard of living throughout the country and was furnishing cheap energy for starting businesses and enabling small towns to grow.

Of necessity, the FDR administration fashioned its Crash programs piecemeal, responding to specific needs, but in so doing, it made conservation a mainstream concept and encouraged scientists allied with the movement to broaden their gaze and think holistically (the word had appeared just a decade earlier) about the earth’s resources. Those quiet conservation-minded scientists, among them the University of Wisconsin professor Aldo Leopold and a young woman named Rachel Carson, who worked in the Fish and Wildlife Service from 1936 to 1949, became important after the war, when atomic physicists and engineers rose as apostles of unlimited resources. The voices of the conservationists, and the challenging questions they asked, would gradually acquire authority when some of the miracles of Big Science turned out to threaten the ecosystems that sustained life on earth.

Today it is hard to imagine how eagerly Americans in the 1950s accepted the “atoms for peace” thesis of inexhaustible dirt-cheap atomic energy. A vision of an atom-powered era of super technology, sketched initially by the physicist John Von Neumann, was elaborated in a 1957 book, *The Next Hundred Years*, by some of his acolytes in these words: “If we are able in the decades ahead to avoid thermo-nuclear war . . . we shall approach the time when the world will be completely industrialized. And as we continue along this path we shall process ores of continually lower grade, until we finally sustain ourselves with materials obtained from the rocks of the earth’s crust, the gases of the air, and the waters of the seas. By that time the mining industry as such . . . will have been replaced by vast, integrated multipurpose chemical plants supplied by rock, air, and seawater, from which will flow a multiplicity of products, ranging from fresh water to electric power, to liquid fuels and metals.”

The American people embraced these visions partly because the awe and secrecy that enveloped nuclear research meant that at first few citizens had either the knowledge or the temerity to question them. And the optimism thus generated ultimately helped persuade our leaders that the United States could simultaneously go to the moon, feed the world’s hungry, carry out a program to modernize the economies of Latin America, and

win a war in Southeast Asia. As the space program got under way, NASA's rocket master, Wernher von Braun, put a capstone on these promises when he declared that the exploration of space was "the salvation of the human race."

But at the same time, ground-level evidence was mounting that the overall environment was deteriorating. In 1956 an atmospheric scientist measured the ingredients of the gathering pall over Los Angeles and chose the word *smog* to describe his baleful discovery. Meanwhile, daily flushings from industries and cities were turning the nation's rivers into sewers. At one point in the mid-sixties, the mayor of Cleveland summed up a growing viewpoint when he predicted that the United States would soon become "the first nation to put a man on the moon while standing knee deep in garbage."

The first serious broad look at the impact of new technologies on the planet's life-support system began in the United States in 1958. It was conducted by the marine biologist Rachel Carson. The ostensible subject of her four-year study was the effect on wildlife of the potent new poisons being produced by the chemical industry; in the end her research led her to compose a treatise that thrust the concept of ecology into the mainstream of human thought.

In 1958 some of Carson's friends in Massachusetts and on Long Island, angry at local mosquito control agencies drenching their neighborhoods with DDT, persuaded her to write a protest article about the environmental consequences. Her piece was rejected by *Readers Digest*, but Carson had become convinced that this was an urgent issue and she decided to enlarge her piece into a short book, even though she doubted that it could ever be a best seller like her previous one, *The Sea Around Us*. Her initial survey informed her that the pesticide problem was hardly a local one, and she realized that her findings and conclusions would put her on a collision course with powerful industries and much of the scientific community. DDT, like penicillin, was widely considered a boon to humankind; public health officers credited it with wiping out malaria in many areas, and agricultural experts were attributing dramatic rises in the world food output to its effects. The Swiss biochemist Paul Muller had won a Noble Prize in 1948 for developing it.

During most of the four years Carson took to complete *Silent Spring*, she was fighting a losing battle against cancer. Her search for facts became a crusade as she scrutinized the work of specialists ("a small number of human beings, isolated and priestlike in their laboratories") who seemed so intent on controlling nature they had no time to analyze the side effects of the products they were creating. As she became aware that the book would be in essence an argument, she decided to address it to two distinct audiences at once. It must be an ecology primer that millions of ordinary readers could understand, but it also had to command the respect of the scientific community and force the chemical industry's scientists into a public dispute concerning the total environment.

She achieved her first goal by presenting detailed accounts of spraying fiascoes in places that ranged from Nova Scotia forests to the rice fields of California. This section of *Silent Spring* connected the new "age of poisons" and "nature's web on interwoven lives" to the everyday existence of her readers. Her second task was more difficult and time-consuming. Knowing she would face fierce counterattacks, she concluded with a fifty-five-page appendix of "principal sources" that listed more than six hundred of the thousands of documents she had gathered and digested. The appendix was her way of saying to her critics: "Here is your substantiation. Tear it apart if you can."

As she had anticipated, chemical and agricultural trade groups mustered their scientists and mounted an expensive public relations campaign to discredit her credentials and her conclusions. Some critics asserted that she was not a "professional scientist"; a nutrition expert at Harvard's Medical School castigated her for "abandoning scientific truth for exaggeration" and characterized her conclusions as "baloney"; the director of research for a leading manufacturer of pesticides put her down as a "fanatical defender of natural balance."

There were other, cruder attacks: Ezra Taft Benson, who had been Secretary of Agriculture in the Eisenhower administration, wondered "why a spinster with no children was so concerned about genetics" and surmised that Carson was "probably a Communist." However, President Kennedy was impressed with her presentation and had his Science Advisory Committee evaluate her findings. The dispute dissipated when, in April 1963, the prestigious committee submitted a report that vindicated her thesis.

Silent Spring provided a cautionary frame of reference for the age; the book stands today as a founding document of the ecological revolution. Translated into twenty-seven languages, it won an international audience and, like Theodore Roosevelt's conservation initiatives, stimulated fresh currents of thought in other countries, it also fomented collaborative action by citizens and scientists that coalesced into a social phenomenon called "the environmental movement." In a single decade ecology was transformed from a science understood by an elite into a central concern of humankind.

Cancer claimed Rachel Carson's life in the spring of 1964. She did not live long enough to be aware that *Silent Spring* would rank as one of the most influential books of the century, but a laurel bestowed on her in 1963 by the American Academy of Arts and Letters must have given her some premonitory pride: It read: "A scientist in the grand literary style of Galileo and Buffon, she has used her scientific knowledge and moral feeling to deepen our consciousness of living nature and to alert us to the calamitous possibility that our short sighted technological conquests might destroy the very sources of our being."

I was in charge of the Department of the Interior when *Silent Spring* appeared, and I well remember the reverberations it sent through the organization. Our responsibilities for resources put us in the forefront of a movement that was fueled first by Carson's vision and then by the work of brilliant biologists like Paul Ehrlich, Barry Commoner, and E.O. Wilson. As we tried to confront the many challenges posed by the new age of ecology, our work led to, among other things, the program to protect endangered species and the end of backing for the American supersonic transport, with its sixty-mile carpet of sonic booms.

Only later, with hindsight, were many of us who had been caught up in the excitement of those times able to see them not as the dawn of a new way of looking at the world but rather as the final fruition of a conservation movement that had begun with the century. Indeed, the wise and always eloquent Aldo Leopold had provided a unifying theme decades earlier when he wrote: "We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."

Promised Land

By Todd Wilkinson, *National Parks*, September/October, 1999, pp. 23-25

The year was 1851. The place: a lecture hall in Concord, Massachusetts, just east of a forest-encircled pond called Walden.

As Henry David Thoreau stood before a room full of contemporaries and recited his now-immortal words—“in wildness is the preservation of the world”—he couldn’t have fathomed how strongly the declaration would resonate a century and a half later.

Thoreau’s poetic sentiments, describing a rare part of the landscape we know today as “wilderness,” has, at the end of the 20th century, become a rallying cry for park advocates who believe that Congress has failed to make crucial wilderness designations and the Park Service has floundered in managing the last, wild places under its care.

Wes Henry, a senior National Park Service (NPS) planner and wilderness management expert, argues that resolving the wilderness question is among the most important issues the agency currently faces. Today, he says, national parks are confronting encroaching development and the increasing intrusion of technology. On a daily basis, airplanes and helicopters buzz wilderness areas in the Grand Canyon previously reached only by foot and raft; cellular telephones ring on top of Mount Rainier; snowmobiles whine throughout Yellowstone’s winter wonderland; and chainsaws roar in isolated corners of parks as trail crews clear fallen trees from the paths of hiking trails.

The sad truth, Henry says, is that although many Park Service employees have the inclination, not many have the training, time, or resources to provide the special care that goes into preserving wild places and making the experience more available to visitors.

“In today’s world, wilderness and the ability to escape civilization” are among the most valuable commodities many parks can offer to the American public, Henry says. “Many people assume that as an agency renowned for preserving nature, the Park Service would be the leader in wilderness management among the land management agencies. Unfortunately, the crush of visitors and relatively stagnant budgets has meant that wilderness and other priorities have suffered neglect.”

But even now, Henry says, the Park Service has been given a chance to redeem itself—and the orders are coming from the top. With a new Clinton Administration initiative to reinvigorate appreciation for wilderness, the future of places such as Yellowstone, Rocky Mountain, Glacier, Great Smoky Mountains, Big Bend, and a dozen smaller parks is a little brighter. The plan, influenced heavily by the office of Vice President Al Gore and U.S. Secretary of the Interior Bruce Babbitt, begins to address the long unfinished national park wilderness agenda.

Wilderness is simply the recognition that the American public bestows on very special wild places, and these parks are surely some of the most special. A Wilderness Task Force made a series of recommendations in the early 1990s, and the Park Service is now beginning to take action. Recommendations included the restart of the designation process, better leadership, training, and educational outreach. NPS Director Robert Stanton will soon sign a wilderness management reference manual, training courses are being offered, and the education issue is being explored at the interagency level.

The reference manual advises park superintendents of their legal responsibility to protect lands already designated as federal wilderness and other tracts under consideration in Congress. More important, from an outside perspective the document serves as a *mea culpa*, confirming allegations leveled by NPCA and its partners that the Park Service has been ambivalent toward wilderness designation or resisted it. Perhaps in the most stinging indictment of all, some agency officials confess that the Park Service has demonstrated less leadership in wilderness preservation than the U.S. Forest Service.

Wilderness is a management touchstone for the Park Service because it serves as a gauge for the public to assess the character of lands inside parks, says David Simon, NPCA's Southwest regional director. "How we deal with the wilderness question in our national parks will determine what kind of experience our grandkids and great-grandkids inherit from us. It's that important," Simon says. "With wilderness, a whole set of values are brought forward, and they get at the very heart of why national parks were created."

Chip Dennerlein, NPCA's Alaska regional director and a member of a national steering committee for wilderness science issues, brought these issues to the fore this spring at a national conference in Missoula, Montana, where hundreds of activists converged to try and rekindle the wilderness movement, which historians say helped give rise to modern environmental awareness.

Thirty-five years ago this September, President Lyndon Johnson gathered conservationists together in Washington, D.C., and signed into law one of the most important landscape protection measures in the country's history—the Wilderness Act of 1964. This act created special land management zones within federal lands where highways, machines, and developments are forbidden, "where the earth and its community of life are untrammelled by man—where man himself is a visitor who does not remain."

Although the act is best known for setting aside millions of acres of "capital W" wilderness in national forests, its intent was also to safeguard the wildest sections of national parks. Over the past four decades, however, critics say NPS has maintained a detached, if not downright hostile, attitude toward proposed federally designated wilderness inside park borders.

The Clinton Administration plan, now before the Republican-controlled Congress, is intended to be a wake-up call for the Park Service by setting out first to resolve the fate of 5 million acres of proposed park wilderness lands that have languished in limbo since the Nixon Administration. Under the old proposals, more than 90 percent of Yellowstone's 2.2 million acres would receive formal wilderness designation, along with nearly 1 million acres in Glacier and roughly half a million acres each in Big Bend and Great Smoky Mountains. Other proposed sites are Arches, Bryce Canyon, Canyonlands, Capitol Reef, Crater Lake, Grand Teton, Zion, Assateague Island National Seashore, Cedar Breaks, Colorado, and Dinosaur national monuments, and Cumberland Gap National Historical Park. A similar call in 1996 went nowhere in Congress. NPCA believes some of these proposals need to be updated to add more acreage. Moreover, some parks are not being advanced, such as Grand Canyon, which has 1.1 million acres of recommended wilderness. Why has the Park Service resisted wilderness protection efforts? Park Service historian Richard West Sellars, author of *Preserving Nature in the National Parks*, suggests that agency leaders have not wanted to be hamstrung by regulations that might hinder development and management options.

Nothing illustrates the clash of values better than the Park Service's modernization program, Mission 66, and the public groundswell that led to the Wilderness Act in 1964. Mission 66, conceived during the 1950s, had the stated goal of repairing park facilities (hotels, visitor centers, nature trails, etc.) that had fallen into disrepair. Initially, the program received praise, but conservationists soon concluded that Mission 66 was compromising natural values by expanding the footprint of development and asphalt.

In a telling admission, the 1994 Park Service Wilderness Task Force Report refers to this conflict: "The amount and degree of park development throughout the decades of the 1930s, 1940s, and 1950s caused a growing concern in the environmental community, and among many NPS staff, that the National park Service was placing too much emphasis on development and not enough on the preservation of pristine lands."

NPCA's Chip Dennerlein says that the Park Service's antipathy for wilderness owes as much to the organizational culture as to economic incentives. The Mission 66 goals took priority over wilderness, and those sympathies have lingered to this day.

As of December 1998, 44 NPS units contain 43.1 million acres of wilderness—the vast majority of it in Alaska. Another 7 million acres have been set aside as wilderness study areas. Once wilderness is designated, the challenge of management begins. For example, only 12 percent of the national parks have wilderness or backcountry plans, and most of those are at least a decade old, observes Henry. With the Clinton Administration

plan aimed at settling the bulk of lands in wilderness study areas, several management issues for wilderness remain unresolved, such as:

- How does the Park Service handle changes in technology, which is outstripping the ability of land management agencies to deal with it? Many of these issues involve noise and whether certain motorized uses should be allowed in wilderness areas, such as personal watercraft, aerial overflights, and snowmobiles. In parks such as Yellowstone, where noise from snowmobiles carries over many miles, wilderness could also mean restrictions on the type of snowmobiles allowed. Another question involves whether cellular phones should be allowed in wilderness areas. Other issues include what role, if any, the Park Service should play in consulting with county governments to zone areas next to parks and whether it is better to have concentrated or dispersed campsites in wilderness.
- How will the Park Service manage forests inside designated wilderness? Ecologists acknowledge that in some parks, controlled burns, possible in combination with mechanized tree cutting, are needed to reduce the possibility of giant forest fires in dry years and to enhance biological diversity. Further, questions exist about who holds jurisdiction over water that originates in wilderness and what limitations should be imposed on above-ground development to protect fragile park cave wilderness systems.
- How does the Park Service apply the “minimum requirements” provision of the Wilderness Act, which requires land managers to use the least-intrusive tools necessary to maintain wilderness areas? The Park Service has been lax in its interpretation of the provision. For years, the Forest Service has been recognized as a pioneer in perfecting “minimum requirements,” and Park Service officials admit they can learn a lot from their sister agency.

In some parks, superintendents have ignored wilderness requirements and have allowed vehicles to cross virgin landscapes. Some superintendents also have invoked the Americans with Disabilities Act to ask that paved trails be constructed into existing wilderness, which has touched off fierce debate.

Simon and Dennerlein are adamant in their belief that wilderness designation is an important means available to the public for protecting parks against unthinking park managers. Because the Park Service in some ways still functions like a military organization, the tenure of individual park superintendents at any one location lasts only a few years. But during his or her brief stint, a superintendent may approve a number of proposals designed to economically aid the local community or the regional tourism industry. While the projects might seem small individually, they add up.

“How can they or outside interests appreciate that this is tantamount to a slow nibbling away of resources that make the area valuable as a park and attractive for recreation and tourism—a competitive event here, a recreation support facility there, and you slowly erode the wildness,” says Henry. “You can’t see it from one decision to the next, but cumulatively, the wilderness is lost—despite the best of intentions.”

Simon maintains that wilderness status actually makes a land manager’s job easier. “For park managers who have neither the resolve nor the backbone to stand up against proposals that compromise the character of the parks they oversee, wilderness designation helps them say no,” Simon says. “Instead of exposing parks to constant aesthetic and ecological erosion, wilderness can help the public hold the agency to a higher standard.”

Superintendents at Yosemite, where 677,000 acres lie in wilderness, North Cascades, which has 634,000 acres, and Mount Rainier, which has 228,000 acres, have been able to reject proposals for hotels and ski areas. Had official wilderness been in place in Yellowstone 20 years ago, snowmobiling could have been prohibited or tightly regulated. Instead, today 100,000 snowmobilers enter the park each year.

But conservationists warn that the transformation must have strategic objectives in mind—objectives that yield ecological benefits in addition to the obvious gains of protecting scenery. Some are concerned that politicians such as Rep. James Hansen (R-Utah) may use the national park wilderness proposal to cut a deal to reduce the amount of acreage in national forest and Bureau of Land Management tracts proposed for wilderness designated in his home state. And others may use a park wilderness bill as a vehicle for anti-environmental attachments.

At present, several park gateway communities have expressed open hostility to wilderness designation because they fear it will hamper the flow of tourism dollars. In February 1999, business leaders in Estes Park, Colorado, on the edge of Rocky Mountain National Park, refused to endorse proposed wilderness (even though since 1973 an estimated 95 percent of the park has been managed to the high wilderness standard as the park's wilderness proposal remained in limbo).

Ray Rasker, an economist with the Sonoran Institute, notes that numerous studies suggest access to wilderness is an economic boon for towns because it provides an incentive for people to live in and visit the area. Echoing that appraisal, the editors of the local Estes Park newspaper wrote in a banner headline that was aimed at detractors: "Rocky Mountain National Park deserves its wilderness" and added in the text of the editorial: "It's time to bury the political hatchet and move ahead with official wilderness. If not Rocky Mountain National Park, then where? If not now, then when?"

Some park superintendents have asserted that certain areas of proposed wilderness should be disqualified because they are compromised by urban settings or sit among existing developments. During the 1970s, the Forest Service used a similar argument in seeking to have national forests exempted. But in 1978 when Congress passed the Endangered Wilderness Act, it said that even sights and sounds of civilization cannot be used to eliminate stretches of federal land from wilderness consideration.

Wilderness that is proposed for parks on the outskirts of cities serves a valuable purpose, says Henry, for it provides urban dwellers with easy access to an unspoiled landscape.

"We are faced with the increasing reality and challenge of managing wildernesses, not in the sense of different places, but more important, in the sense of different types of wilderness," suggests NPCA's Dennerlein.

In general, Dennerlein concludes: "Wilderness is about sharing the delight of aboriginal Americans when they camped at the edge of a cliff thousands of years ago and were inspired by the view. It is about gaining a sense of humility in the face of nature; it is about putting certain pieces of the landscape off limits to any human temptation to exploit or despoil them; it is about thinking ahead and viewing the glory of the land in spans longer than your own life.

"In the modern world, that's difficult for many to grasp. Wilderness is not convenient, but the values of wilderness are as important to our human condition—present and future—as they were when the Wilderness Act was passed. Perhaps, more so."

Wilderness—America's Lands Apart

By John G. Mitchell with photos by Peter Essick, *National Geographic*, November 1998, pp. 2-33

National Geographic magazine has granted special one-time permission to the National Park Service for the following article to appear only in the NPS Wilderness Education and Interpretation Resource Notebook. For additional information contact the National Geographic Text Syndication Department at 202-857-7651.

It is hard to resist a place that is known as Kootznoowoo, Fortress of the Bears. That's what the resident Tlingit call it, rejecting the square-rigged English name, Admiralty Island, and the antique fur trader's Russian, Ostrov Kutsnoi, Fear Island. One wonders which the fur men feared more—the Tlingit or the bears. Or the wilderness.

And wilderness it remains, most of this island in the rain forest archipelago of southeast Alaska—nearly a million acres of statutory uppercase-W Wilderness set aside by the U.S. Congress out of the country's largest national forest, the Tongass. There are 18 other designated wilderness areas in the Tongass and 624 throughout the federal lands of the United States. A lot to choose from. But because of my lack of resistance to bears, I have chosen Kootznoowoo to help me gather my thoughts about wilderness and share what I've seen and heard of it elsewhere over the years.

A floatplane has brought me to this pebbled beach at the edge of Windfall Harbor, a notch in Kootznoowoo northeast of the Tlingit village of Angoon. About 600 people live in that village. The island's bears are said to outnumber them two to one.

Coming in, we saw a couple of bears from the air, big brown grizzlies grazing on spawned-out salmon in the estuaries of Windfall's graveled streams. My companion, David Cline, an Anchorage conservationist and chairman of the nonprofit Kodiak Brown Bear Trust, instructed the pilot to put us down at a beach where there aren't any salmon streams. Though Cline had once been charged by a grizz and successfully outbluffed it, he assured me that coastal bruins prefer salmon to people almost every time. *Almost?* I wondered. And I forgot to bring pepper spray.

It is a fortress all right, this Kootznoowoo Wilderness. Beyond the beach the forest begins in a tangle of saltwater sedge and alder, then reaches for the sky in jagged battlements of Sitka spruce and western hemlock. Inland the forest floor yields a labyrinth of giant moss-covered snags and nettlesome clumps of devil's club. West, above the misted moat of Windfall Harbor, the mountains rise steeply through layered clouds to elevations of 4,000 feet. It is the kind of terrain that frowns on a casual stroll. The place for walking is the beach, at low tide. In the morning Cline and I will catch that tide and walk up the beach to the head of the harbor, looking for bears at a respectful distance.

So what thoughts do I have to gather, standing alone at the edge of the water while Cline scouts the fortress for a good place to camp? Only that one can never know enough about wilderness even if one has been scratching the territory and the idea for half a lifetime. And *that* is something to gather right off the bat, for wilderness is not just a place, or a congeries of places, or a management system—the National Wilderness Preservation System—that was put in place by an act of Congress. Wilderness is an idea. It is an idea at once personal and worldly—as personal as risk and freedom and solitude and spiritual refreshment, as worldly as the living earth and waters that define it.

More than a century and a half ago the Concord eccentric Henry David Thoreau begged in writing to be shown “a wildness whose glance no civilization can endure.” If he ever came close to experiencing such a thing, it was likely near the top of Maine's Mount Katahdin in September 1846. He would write of feeling “the presence of a force not bound to be kind to man.” It was a presence I had clearly felt myself, often in mountain country, once or twice in places where I imagined no other human might ever have stood. I had felt it too just moments ago, after our pilot waved good-bye, kicked on the engine of his plane, and taxied into the harbor for his takeoff toward Juneau.

“Talk of mysteries!” Thoreau had written of those other woods a wild continent away. “Think of our life in nature,—daily to be shown matter, to come in contact with it,—rocks, trees, wind on our cheeks! the *solid* earth! the *actual* world!” I watched the floatplane lift off the water into the clouds. Then even the sound of it was gone. “*Contact!*” Thoreau had written, and for a second I thought I might have said the word myself. “*Contact!*”

On September 3, 1964, after eight years of deliberation and 66 drafts, an act creating the National Wilderness Preservation System passed under the pen of President Lyndon B. Johnson. The measure established 54 wilderness areas in national forests in 13 states and decreed that the 9.1 million acres within them were to be protected in their natural condition. Wilderness, the act declared, was to be recognized “as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” And the law further stipulated that such areas were to be forever free of “permanent improvements” such as roads and man-made structures.

Additional measures were later enacted to include more wildlands in the eastern U.S. and expand protection beyond national forests to selected backcountry areas of the National Park System, the National Wildlife Refuge System, and the public domain of the Bureau of Land Management. In 1980 the Alaska National Interest Lands Conservation Act more than doubled the system’s existing acreage while allowing established practices, such as the use of motorboats and floatplanes, prohibited in most wilderness areas in the lower forty-eight. Today the nation’s 624 wilderness areas embrace more than a hundred million acres, or about 4.5 percent of the U.S. landmass.

Even before a wilderness system was officially in place, exuberance and a fondness for mountain scenery posted me along the edges of a few of its future sites. I recall a scramble on the Great Western Divide of the Sierra Nevada above Mineral King, where the trail cairns made contact with a high, craggy country destined to become the Sequoia-Kings Canyon Wilderness. At 736,980 acres it is California’s second largest, after the Death Valley Wilderness. And once there was a wind-chapped prow on a spiny, porphyritic ridgetop in New Hampshire’s White Mountains, above the green gulf of the once and future Pemigewasset Wilderness.

Since those early days, my sorties into this diverse assemblage of wildlands have ranged from a tundra hike in the most remote of them all, the Mollie Beattie Wilderness (eight million acres in the Arctic National Wildlife Refuge on Alaska’s North Slope), to a binocular visit to one of the system’s smallest units, Three Arch Rocks (a 15-acre seabird sanctuary off the Oregon coast—and off-limits to humans). But I’ve missed so much of it too—the Delirium and the Menagerie, Apache Kid and Cache la Poudre, the Washakie, the Popo Agie, the Irish, the Scapegoat and the Superstition, Bisti, Bear Wallow, Blood Mountain, and Hell Hole Bay, among many others.

Still, I have seen and heard enough, in the places that I didn’t miss, to report that the National Wilderness Preservation System is holding up reasonably well after nearly 35 years. Not that its stewards are wanting for problems. Like the national forests, parks, and refuges that contain it, Wilderness U.S.A. is peppered with problems of heavy use, abuse, and underfunding, eroded trails, invasive species, squabbling constituencies, and local interests hostile to government regulation. Yet so far, for the most part, the resource prevails.

Of all the problems, visitor impact on trails and campsites consumes the largest segment of the backcountry managers’ time and charges. Almost everyone in the U.S. today lives within an easy day’s drive of a wilderness area, and each year more people are making the trip. Though absolute numbers are hard to come by, the agencies report that recreational use of wilderness has increased sevenfold over the past three decades. The most heavily used areas remain those closest to large metropolitan areas, such as Denver, Los Angeles, and Seattle. Near Seattle the Alpine Lakes and Mount Baker Wilderness Areas are about as hard hit by hikers and backpackers—and erosive rainstorms—as any in the system. “Just trying to keep these mountain trails open is a major challenge,” says Gary Paull of the Forest Service. “And it doesn’t help to be operating with a trails budget two-thirds of what it was three years ago.”

Such problems seem remote here at the misty edge of Kootznoowoo, where there are no visitors but us and no greater immediate challenge than the prospect of starting a cook fire with wet wood.

It is done. From hemlock shavings come wisps of white smoke, a puff of orange, glowing, growing, curling around the kindling. Done. David Cline is a good scout.

Sitting now with our boots to the woodsmoke, Cline and I agree that while those little gas-fed backpacker stoves may be ecologically correct—if not obligatory in wood-scarce or combustible backcountry—they cannot begin to match the crackling ambience of a good old-fashioned campfire. What is it that bonds us so tightly to woodsmoke and pyrolysis? The spark of some primordial memory, the gene that reminds us how dreadful it must have been when the dark was never light enough at the back of the cave? Cline isn't sure, and neither am I.

Nor can we be sure of absolute answers when the fireside chat turns to contemporary questions, such as the pros and cons of manipulating wilderness in order to preserve or restore some degree of primeval naturalness. Fire sits at the center of that issue too, not our tidy Kootznoowoo campfire but rather the big burns ignited by nature's lightning and the smaller burns prescribed by human managers to compensate for decades of fire suppression.*

In a few wilderness areas natural wildfires are no longer suppressed where they pose no threat of serious smoke pollution or damage to neighboring properties. But in many regions natural fires may not occur often enough to restore wild land to what some scientist thinks might have been its pristine, pre-Smokey Bear condition. In which case the managers may intervene by orchestrating a prescribed burn.

"In designated wilderness," Cline says, "I'd have a problem with that, just as I would with suppression of fire."

So would a lot of other people. I tell Cline of my visit to a wilderness conference at the University of Montana in Missoula a few months earlier and of the dichotomy there between defenders of intervention management and those who believe wilderness is managed best when it is managed least or not at all. "We can't just let these areas 'go,' or we'll end up with something we never anticipated," said one scientist who advocates intervention. But on the other side of the issue, Tom Power, a writer and economics professor at the University of Montana, told me: "The wilderness agencies have no humility, just this sweeping idea that landscape managers can do better than nature can."

More troublesome than fire for some managers is the prospect of exotic species invading wilderness to usurp native habitats. In Montana years ago horses or cows introduced the seeds of two unwelcome plants, leafy spurge and spotted knapweed. The exotics have since spread over hundreds of thousands of acres, transforming wilderness grasslands into weedy barrens.

Meanwhile, in dozens of wilderness areas across the country, lakes and streams were stocked with non-native fish to enhance the visitor's recreational opportunities. But all too often there was an unexpected catch: The alien species ate up or starved out the indigenous ones and altered the ecosystem. So what's the solution? Do managers, as some would argue, refrain from further meddling and hope that nature will set things right in the long run? Or, for the sake of restoring a lost naturalness, do they intervene—sometimes with chemicals—to purge the spurge and the alien trout?

Cline, who once served a hitch as a wilderness biologist with the U.S. Fish and Wildlife Service here in Alaska, is squinting at me through the wood-smoke. We agree there is no easy answer. What might succeed on a wilderness island off the coast of Alaska might not work at all off the coast of Georgia.

Cumberland Island is the southernmost of Georgia's barrier islands and its largest, with 17 miles of white-sand beach and a maritime forest of moss-draped live oaks and towering loblolly pines. It is not connected to the mainland by bridge or causeway. For that reason, among others, much of Cumberland was acquired by the National Park Service in 1972 and declared a national seashore. Ten years later, at the behest of conservationists who feared the Park Service might develop the seashore for intensive recreation, Congress designated nearly 9,000 of its 36,400 acres as statutory wilderness. In so doing, however, Congress recognized that certain nonconforming uses and structures, such as the narrow unpaved road that runs the length of the island, could not soon be abandoned. They would have to be phased out over the years. Cumberland, in effect, would be a

kind of evolving wilderness. Thus, even now, motor vehicles belonging to the Park Service and private landowners have access to this road and to the wide-open avenue of the beach. Backpackers complain that the vehicles disrupt their wilderness experience.

But some advocates of a wild Cumberland are more concerned that the island's ecological stability has been put at risk by feral hogs and horses. The hogs, introduced as provender in antebellum days, compete with native wildlife for the island's slim pickings, including sea turtle eggs. Park Service trappers and marksmen have had scant success controlling the porcine population. The free-ranging horses, some descended from Arizona mustangs imported early in this century to entertain wealthy landowners, now number nearly 200 and are decidedly competitive for browse with white-tailed deer. The sight of mares and stallions trotting along the beach has proved so entertaining to visitors that the Park Service is loath to have the horses removed.

One day on Cumberland I called on Carol Ruckdeschel, a biologist who lives at the island's north end, beyond the wilderness area, collecting and autopsying the carcasses of sea turtles washed up on the beach. Ruckdeschel, like many of the island's two dozen residents whose tenure predates the seashore designation, retains the right to live out her life here and to drive on the beach and the road. An ardent wilderness booster, she tries to keep her transportation profile low to the ground, the preferred ride being a one-cylinder all-terrain vehicle.

"If you just look ahead a hundred years or so," Ruckdeschel said, "there'll be something special here. We'll all be dead and gone—no more people living out here. And no vehicles. Hell, right now the hogs and the horses cause more damage than the vehicles do."

Now, on Kootznoowoo, Cline and I have polished our dinner plates, poured a nightcap, and are silently roasting our separate thoughts over glowing coals. For my own part, I'm wondering how accessible wilderness can be, and still be Wilderness.

Sure, cracking Kootznoowoo was easy with a floatplane. But if this were a wilderness constrained by the rules of the lower forty-eight, to reach Windfall Harbor we'd have been obliged to endure either a two-day paddle by sea kayak or an arduous 25-mile trek from Angoon. Which leaves me in a somewhat vulnerable position as I declare that I cannot understand why some critics of statutory wilderness regard restriction of motorized access as an act of discrimination against the old, the infirm, and the vehicularly pampered. Thus, these scoffers argue, access to wilderness is enjoyed only by the physically elite.

As one who assuredly is not among that elite, I affirm that neither age nor infirmity barred me last year from paddling a canoe into Florida's Juniper Prairie and Everglades Wilderness Areas, riding a horse into New Mexico's Gila, or poking afoot into the Otter Creek wilds of West Virginia far enough to absorb a short measure of solitude.

But, of course, there are many wildernesses where canoes, kayaks, or horses don't work, steep mountain places accessible only to the hardest hikers. Last year I stood at the edge of a few of those places, looked in—or, rather, *up*—and, without too much regret, tipped my hat to the lost opportunity. It was like that with the Enchantments, in the Alpine Lakes Wilderness of Washington State.

I had heard about the Enchantments from a mountaineering friend in Seattle; about stark clusters of granite spires and glacial lakes and waterfalls and heather meadows and gnarled larches with needles that glowed like gold splinters in October; about the area's Lost World Plateau and the Knitting Needles and Dragontail Peak and Witches Tower. "The way is long, steep and grueling," one guidebook warns. "A strong hiker needs at least 12 hours to reach the high lakes. The average hiker takes 2 days. The rest never make it."

I knew where that left me. So early one morning in June I dropped by the Wenatchee National Forest ranger station in Leavenworth, Washington, to see if I could find a strong or average hiker waiting there to pick up a permit to camp overnight in the Enchantments. Because of lingering snow at elevations over 6,000 feet—the Cascade summits here top 8,000—June is not the most popular month for backpacking the Enchantments. But I

was in luck. Mark Simon and his friend Heather Wolfe, permits in hand, were getting ready to head out. They both looked strong enough, in their early 20s, traveling light with 30-pound packs, food for three days. They'd take it slow, Simon said, because of his bad knee. "Blew out a ligament skiing last winter," he explained.

How did he feel about the Forest Service restricting overnight use with permits issued by advance reservation or daily lottery? Did he feel that was an infringement of his liberty to use public land? "It's an inconvenience, that's all," he said. "The permits are a good thing. Without them, I don't think the Enchantments could withstand all the use they'd otherwise get."

I wished Simon and Wolfe happy hiking, paid my respects to the Leavenworth district ranger and her wilderness manager, and then drove out along the Icicle Creek Road to the Enchantments trailhead at Snow Creek. There was scattered dead timber on the slope that the trail ascended in switchbacks. I was hoping to catch a last glimpse of the couple working their way up the mountain, but already they were out of sight over the first ridge. Forget that blown-out ligament. Those two were better than average. And I was happy for them, because I knew they were going to make it to the high country.

Tents do not agree with me. Flat on my back in a sleeping bag, I much prefer the starlit sky to a nylon roof, except when the bugs are biting or the clouds are spitting—and that's what the clouds are doing to our tent tonight in the Kootznoowoo rain forest. A steady drizzle it is, just enough patter to muffle the imagined footfalls of insomniac bears. I try to think of other nights untented—no biting bugs, no spitting clouds, no grizzlies. I think of a night flat on my back beside the Middle Fork Gila River, with the rimrock framing a wedge of sky flecked with a million stars.

It was a pilgrimage, that horseback trip into the mountain backcountry of southwestern New Mexico. If I was going to celebrate the idea of federal wilderness, I had to go to the place where it began—sort of like celebrating the Fourth of July beside the Liberty Bell at Philadelphia's Independence Hall.

The Gila—pronounced hee-lah—is both river and wilderness tucked into a national forest of the same name. Elevations run from 5,000 feet on the floor of some canyons to nearly 11,000 on top of Whitewater Baldy in the Mogollon Mountains. Cool forests, sparkling trout streams, elk and bighorns and javelinas, black bears and mountain lions, solitude for those who seek it and scenery enough to knock your specs off. I went out of Gila Hot Springs with outfitter Becky Campbell, her husband, David Snow, and Charles Little, an old friend and writer with much savvy about matters of the land and why land counts in the human scheme of things. And I wanted Little's company in the Gila because he is savvy about Aldo Leopold.

We rode in through pinon and juniper country, down the twisty Little Bear Canyon to the Middle Fork, and then upstream between towering red rock cliffs and riverine sycamores to a parklike spot with plenty of dead Gambel oak for the cook fire and deep ponderosa shade for hobbling the stock. I thanked my horse, Tater, for the ride, staked out a stargazer's spot for my bedroll, and perched on the riverbank, watching for signs of insects and trout. Little sat down beside me, pointed at a big pool upstream, and said, "I'll bet you anything Aldo Leopold wet a fly line right there about 80 years ago."

Why 80?

"Because," said Little, "that's about the time Aldo Leopold got into this country first time around."

Leopold's is such a runaway story, we'd best pull back on the reins. He hailed from Iowa, long after the sodbusters had tamed the prairie. Maybe he got a taste of the wild during boyhood summers in the Les Cheneaux Islands, topside of Lake Huron; every time he looked north from there, he imagined boreal mysteries beyond the horizon. By and by he went to Yale, joined the Forest Service, was posted to Albuquerque, rode into the Gila on survey patrol.

One day in 1919 Leopold had a talk with another young forester named Arthur Carhart. A landscape architect by training, Carhart had this crazy idea that the shorefront of Trappers Lake, up in the White River National Forest of Colorado, ought to be preserved for its scenic value rather than developed with roads and summer cabins. It

was an encounter of kindred spirits. On behalf of scenery, Carhart would prevail in preserving Trappers Lake against the incipient roadbuilding mentality of the Forest Service, while Leopold within a few years would be advocating an even larger heresy—the setting aside of wilderness areas in national forests for public recreation. And what sort of area did he have in mind? An area “big enough to absorb a two weeks’ pack trip,” he wrote; a place “devoid of roads . . . or other works of man.” Such as? Such as “the headwaters of the Gila River,” a half million acres that could absorb a hundred pack trips a year “without overcrowding.” In 1924, by administrative decree, the Forest Service designated a portion of the Gila as its first wilderness. (Today the Gila and the adjoining Aldo Leopold Wilderness embrace nearly 1,200 square miles.)

From Leopold’s earliest writings—and from the Gila—the wilderness movement gained momentum, inducing the Forest Service to honor roadless areas as much as commercial clear-cuts and enrolling such influential leaders as Bob Marshall, a co-founder with Leopold of the Wilderness Society, and Howard Zahniser, who as that society’s executive director would spearhead the legislative effort resulting in the Wilderness Act of 1964.

“And now,” Charles Little was saying beside the Gila River, “we have a wilderness system, but I’m not sure we yet understand Leopold’s wilderness idea. It’s not just a matter of protecting land because it’s scenic or because we can pack in for three days to catch trout. ‘Land is a community,’ Leopold wrote. Its waters, soils, plants, animals all fit together not for our sake but for their own.”

“Trouble is,” I said, “that’s what’s driving some people right up the wall.”

In recent years I have encountered more than a few individuals who feel uneasy, if not threatened, when bureaucrats or new-wave biologists speak of preserving wilderness ecosystems at the expense of human use. That evening with Little beside the Gila River, we listened to the complaints of our outfitter, who was deeply concerned that officials in faraway places were making decisions—about livestock grazing in the Gila, for example—better left for the local folks to sort out. And one month later, in the northern Cascades of Washington State, I heard similar tales about government regulation from another outfitter, at a hideaway place called Stehekin.

For a perfect little community at the edge of wilderness, you’d be hard put to find one more remote than Stehekin. It sits up there at the top of that landlocked fjord, Lake Chelan, tucked into one big North Cascades National Park wilderness—the Mather—and bracketed by two other areas administered by the Forest Service—Glacier Peak and Lake Chelan–Sawtooth. Wilderness Village, some people call it, though not the handful who live there year-round served only by boat and floatplane, the lake so deep and windy it rarely freezes.

Cliff Courtney is the proprietor of the Stehekin Valley Ranch a few miles beyond the village, a hop and a skip from the Mather Wilderness. Courtney runs white-water raft trips on the Stehekin River and, with his brother Cragg, horse trips into the mountains. Some of the trips are called Hike & Like It, the idea being that you hike while a horse totes your gear.

One morning I sat with Cliff out behind the ranch’s main lodge, looking across a stock corral and a field of new rye and over the spruce tops to mountain snowfields almost blinding in their whiteness. He was telling me about government regulations.

“They’re talking about cutting us down to 12 sets of eyes,” he said. “That means six horses and six people per trip. Not much for earnings when we used to be able to take 20 to 30 people a trip.” Courtney took a deep breath and said, “You keep making it harder for people to be a part of wilderness, and you’ll lose them. Okay, I may be grinding my own ax, but it seems to me the best thing you can do for wilderness is to show it to people and share it with people and let them see how great it is.”

Courtney’s father, Ray, who died in a trail accident some years back when a loose packhorse knocked him off a 200-foot cliff, helped form the North Cascades Conservation Council and led Sierra Club trips to promote wilderness designation. But later, Courtney said, his father felt betrayed when conservationists pushed for tighter controls on wilderness access.

“In a lot of people’s minds,” Courtney went on, “there’s a real question whether all this overlaying of regulation is really to protect wilderness or part of some greater plan to keep people out. I find fewer and fewer everyday Joe and Sally Sixpacks who can relate to the wilderness. They haven’t been there. For a lot of them, wilderness is just a word that means No.”

It is morning in Kootznoowoo. The rain has stopped, the tide has ebbed. David Cline and I are walking up the beach toward the head of Windfall Harbor, toward that wide gravel estuary where we spotted one of those grazing grizzlies from the air. A harbor seal, goggle-eyed, watches us from the water. An eagle, suspicious of our approach, flees its roost at the top of a Sitka spruce. A mile away, on the other side of the harbor, a small dark spot moves slowly along the water’s edge. Cline measures the spot with his eye and identifies it as a young grizzly.

Suddenly I am feeling exposed and alone on this wide-open strip of tidal cobble and glacial grit. Possibly it’s that old Thoreauvian imagining again—the presence of a force not bound to be kind to me, or to Cline. Whatever it is, I like it. What I don’t like are the forces not bound to be kind to wilderness.

As I follow Cline to the head of Windfall Harbor, I am thinking that the rule books by now ought to be pretty clear regarding motors and wilderness, but what about all these newfangled high-tech electronic devices that weren’t even around when the Wilderness Act’s language was drafted more than a generation ago? I mean what about cell phones, global positioning systems, and laptop computers? How wired can the wilderness be, and still be Wilderness?

Put that question to federal agencies, and you’ll hear variations on a theme expressed by Jeff Jarvis, the Bureau of Land Management’s wilderness leader. “Sure, these items will detract from the wilderness experience, but it’s the individual’s choice. We have no intention of regulating these devices any more than we would regulate the use of cameras.”

Wes Henry, Jarvis’s counterpart over at the National Park Service, agrees, but he responds to the question a bit more critically. “People are using these things as crutches,” he says. “A woman called once on a cell phone from the middle of the wilderness. She said she had blisters and was tired and wanted us to take her out in a helicopter.”

Cyberspace invasion of wilderness worries some purists more than cell phones do. The way they tell it, it won’t be long before our backcountry trails are obstructed by hackers hunkered over their laptops, checking their e-mail.

Richard Bangs, a West Coast expeditionary entrepreneur and advocate of online adventure travel, has carried the information age even deeper into the wilds. Defending the use of computers, digital cameras, and satellite communications to link a wilderness expedition to a website, Bangs wrote: “The Internet is not the death of wilderness. It may be its savior. . . . For the first time, we can showcase the beauty and magic of a wild place to a global audience, and millions can participate in a journey through it without ever breaking a branch or stepping on [fragile] soil.” Bangs’s cyber-sorties have ranged from Africa to the Antarctic.

Virtual wilderness. It may be with us sooner than we think. In Minnesota the Boundary Waters Canoe Area in Superior National Forest now has a website designed to help the prospective visitor plan a wilderness trip. Not everyone is ecstatic. Alan Watson, a social scientist at the Aldo Leopold Wilderness Research Center in Missoula, Montana, says: “They’re approaching a level of information that makes me wonder why one would want to go to that wilderness. The sense of discovery is why people go there, but discovery’s gone. Risk and adventure—gone. I felt like they’d just taken the Boundary Waters away from me.”

At the head of Windfall Harbor a braided stream rushes out of the rain forest through a wide and open valley edged with alder and spruce. This is where, from the floatplane, we saw the big grizzly. This morning no bear is in sight. “I’ll bet you it’s up there,” Cline says. “Taking a nap in those alders. Bloated with salmon.” I can believe it, because this stream is bloated with salmon—thousands of them, mostly pinks, dead or dying in the shallow

riffles, the last of the spawners fighting the flow with flapping tails, humpbacks atilt. What a movable feast for the seagulls, the eagles, and the bears. And what a gift to the sea as the uneaten carcasses rot and post their nutrients down this stream to nourish invertebrates—the food supply for next year’s salmon. Contact. This is how wilderness works.

But where is the bear?

“We *could* stroll upstream a way,” Cline says.

“*You* could. I’ll watch.”

Cline splashes across a channel and takes a direction that looks discreetly sideways to upstream. Be wary of poetic justice, Cline. You don’t want to deprive the Kodiak Brown Bear Trust in Anchorage of its chairman.

My friend’s passage across the gravel bars puts the squabbling gulls to flight, and suddenly I find myself wrapped in a circle of silence that is punctured only by the stream that runs through it and by the struggle of the dying fish. I close my eyes and try to imagine the measure of this million acres of Kootznoowoo Wilderness, this one percent of all our designated wilderness between the Arctic and the Everglades. The devil in me asks, Do we really need it all? Isn’t a hundred million acres more than enough for scenery and solitude and risk and self-discovery and genetic diversity and, as a wise woman once remarked, for securing answers to questions we have not yet learned how to ask?

Or is a hundred million acres *not* enough?

There are those—on the right hand of Congress and in the western countryside—who say we have too much wilderness already and should forthwith unhinge it from the federal estate. But others, citing the pressures and stresses on existing wildlands, argue that we could double the size of the system and still be deficient. Advocates cheer a recent Clinton Administration temporary moratorium on roadbuilding in millions of acres of national forest, thereby suspending logging and converting those lands into de facto, though impermanent, wilderness areas. They demand additional wilderness in the forests of the Northwest, the Rockies, and the Appalachians. They call on the National Park Service to complete or update its review of wilderness study areas in 27 parks, including Grand Canyon, Glen Canyon, and Big Cypress. They want the Bureau of Land Management to recommend to a divided Congress the designation of 8.5 million acres of red rock mesas and canyons in southern Utah. Some even say that 58 million acres of wilderness in Alaska is not enough; 125 million acres more should be designated.

“We have only a fraction of the wilderness we’re going to need,” says Gaylord Nelson, the former senator from Wisconsin, father of Earth Day, and longtime counselor to the Wilderness Society. “Our public lands are being overwhelmed by population pressures. There’ll be half a billion people in this country by 2075. The rarest thing you’ll find by that time will be a natural area undisturbed by the hand of man. It will be a real tragedy if we don’t start now doubling or even tripling the extent of our designated wilderness.”

Cline has come back from his reconnoiter with a sad sort of smile on his face. “Gets pretty narrow up there,” he says, hooking his thumb at the alder-edged valley behind him. “Not a good place to spook a sleeping bear.” We head back toward camp. About a hundred yards down the beach,

Cline stops and turns to look one more time at the gravel flats and the long green valley tapering into the rain forest. If I know Cline—and what wilderness does to people like him—I know exactly what he’s feeling. He doesn’t want to leave the uncertain presence in the alders. He wants to go back up that valley, into the real world.

In Wilderness, Don't Phone Home

By Christina Nelson, *High Country News*, Vol. 30, No. 15, August 17, 1998

A man recently fell and broke his leg while hiking in the wilderness area above Boulder, Colorado. While I wondered aloud how anyone could meet this fate in such a well-worn area, it was his rescue that piqued my attention. The lost hiker carried a cell phone and a hand-held Global Positioning System (GPS), a precision electronic navigation aid that locks onto orbiting satellites and calculates your exact position and movement.

He called 911, gave them his exact coordinates, and rescue was fast and efficient.

Yes, things are a changin' in the Wild West. A study by Duracell Battery finds that 38 percent of vacationers now pack a cell phone or pager. Eighteen percent bring along a notebook personal computer or electronic personal organizer.

On a recent hike into the high country, a friend of mine pulled out his cell phone at 13,000 feet, sat on the edge of a stunningly beautiful rock precipice and dialed his wife two states away. I didn't know that he had taken the phone, and was immediately torn by strong, opposing opinions. On one hand, the romance of it all. I mean, what woman wouldn't love to hear her lover's voice from a mountain top? To know that amid such beauty he was thinking of her? But the pit in my stomach told me that deeper feelings prevailed; feelings that had to do with the cell phone's immediate transformation of the wilderness.

I go to wilderness to leave linear time behind. I also leave behind the world of instant access, where phones, e-mail, cars and airplanes provide fast contact with anyone in the world. It is a step from the planned, organized, domesticated world into the realm of the unexpected. Whether a meadow of mariposa lilies or a sudden lightning storm at tree line, the beautiful and dangerous surprises of wilderness keep me well-honed. I must plan carefully. I must be aware of changes in wind and weather.

A cell phone changes all of this. Suddenly, I don't have to be responsible for poor planning, silly mistakes or bad luck. Like the hiker who broke his leg, I don't even have to take a map if I have my toys. In today's world, rescue teams with helicopters wait to save me from myself.

Colorado has approximately 3 million acres of wilderness and multitudinous millions of acres of national forest. Like its neighbors, much of its land is public. Public lands are, in fact, the partial definition of the West. For years, people have come to the forests and filled darkness with Coleman lanterns. Then, they filled silence with ghetto blasters. And now, they fill solitude with instant access to the technological world.

Next week, I'm riding my horse into the wilderness to camp alone for a few days. I'll pack a .357 on my hip. Three shots, three whistles, three of any noise is a distress signal. This is closer to the West I came to live in 20 years ago. A place where danger and beauty coincide, where I am part of the food chain, vulnerable to weather changes, dependent upon instinct. A place where personal responsibility gets the utmost test.

Yes, part of my gear will be a space-age fabric, lightweight tent. I will take a down jacket for warmth, and a small cooking stove. I do not wax negative on the products of technology. But somehow, my gut tells me that we've crossed the line with cell phones in wilderness.

It's about taking chances. In today's sanitized world we've minimized risk so much that the psyche deadens, and violence becomes more and more perverse. There's a reason why old cultures ritualized violence. The psyche and soul need tests. This is why rodeo still lives in the West, why cowboys still brave the elements with their stock across miles of dangerous terrain, and people leave the safety of their homes with a pack on their back and head into the mountains.

Phones and computers change the wilderness as much as forbidden roads and chainsaws. Perhaps more.

The Wilderness of History

By Donald Worster, *Wild Earth*, Fall, 1997, pp. 9-13

I live in a part of America without any wilderness—no large tracts of land existing within hundreds of miles that are free of producing a commodity. This country used to be wild prairie running north all the way to the Saskatchewan; now, we have less than one percent of the original tallgrass prairie left, and much of the shortgrass is gone too.

Last fall, it is true, we finally got a prairie national park. The struggle was long and tough against the Farm Bureau, the cattlemen's association, and former Senator Robert Dole (who balked at spending \$10 million for park acquisition but not at \$1 billion for National Guard aircraft to beat back our enemies). Even now, with the park a legislative reality, a Texas businessman has his cattle out there, on a lease, and the anti-park forces are insisting that the cattle stay there; they demand it be a monument to the beef industry rather than returning it to bison and pronghorn. Anyway, they say, that land was never wilderness.

Such assertions are getting support, unintended though it may be, from some of my colleagues in environmental history, many of whom I fear have not spent enough time among the good folks who claim to “work for a living” – members of the Farm Bureau, for example – and do not sufficiently appreciate how hard it is to get an ethic of environmental restraint and responsibility established among fierce private property and marketplace advocates. Otherwise, my colleagues would be a little more careful about the sensational headlines they encourage, like “Wilderness is a Bankrupt Idea.”

That is not the headline that William Cronon really wanted to see when he wrote his controversial essay, “The Trouble with Wilderness, or Getting Back to the Wrong Nature,” published in the book *Uncommon Ground: Toward Reinventing Nature* (1995). What he meant to say, I think, was that sometimes wilderness defenders have hurt their cause by sophomoric rhetoric that alienates thoughtful people and lacks any social compassion. He may be right on that score. The wilderness movement needs more self-scrutiny, needs a larger commitment to social justice—and, above all, needs the patience to read its critics more carefully. On the other hand, Cronon and some other authors in *Uncommon Ground* should take a dose of their own medicine. They have at times inflamed the discourse, missed the more profound ethical core of the movement, and made a few weak, shallow arguments of their own—arguments that need critical scrutiny and exposure. Therefore, with hope for a more mutually respectful and probing debate than we have had so far, I examine some of those arguments. Here is my list of major errors being committed about the wilderness by some environmental historians.

Error # 1:

North America (we are told) was never a “wilderness” – not any part of it.

Some revisionist historians now argue that ignorant Europeans, animated by “virgin land” fantasies and racial prejudices, had it all wrong. The continent was not a wilderness; it was a landscape thoroughly domesticated and managed by native peoples. It was Indians, not low rainfall and high evaporation rates, who created a vast sweep of grassland all the way from the Mississippi River to the Rocky Mountains, and they did so by constant burning. They herded the Bison like domesticates in a big pasture. They cultivated the wild plants and made a garden of the place. All over the continent, they completely civilized the wasteland long before the white man got here.

I respect the Native American stewardship and would not take credit away from their considerable achievements, but such characterizations by historians are huge extrapolations from limited examples. Two million people spread over what is now Canada and the United States, a people armed with primitive stone tools, simply could not have truly “domesticated” the whole continent. ¹

By comparison, 300 million Americans and Canadians today, armed with far more powerful technology, have not wholly domesticated the continent yet; in the US, by a strict standard of evaluation, 100 million acres of virtually pristine wilderness exists under protection while more is without protection, and in Canada areas with no roads, towns, mines, or mills still dominate most of the north.

We are further told by some historians that the Indians were pushed out of their domesticated homeland in order to *create* a wilderness for the white man. There certainly was a massive dispossession, often bloody and ruthless. But if our national parks, wilderness areas and wildlife refuges were once claimed by native Americans, shifting in tribal identity over time, so once were our cities, farms, universities, indeed the very house lots on which we dwell. What are we now to do about that fact? Should we give all national park and wilderness areas back to the native Americans? Or open them for subsistence hunting (by people likely to be armed with modern rifles and snowmobiles) or for agriculture? If we do that, then are we logically bound to permit the same repossession of our campuses, suburbs, and cornfields? I have not heard anyone, however, seriously propose that Los Angeles or Stanford University be returned to their “rightful owners.” Why not? Why are parks and wilderness areas viewed as suspect forms of expropriation while the vast portion of the country under modern American economic use is not really questioned? Obviously, Indian land claims is not the real issue here; debunking preservationists is.

A more sensible policy would be to find out whether any of the 100 million acres of currently protected wilderness are in violation of valid treaty rights and, if they are, to settle in court or get the lands returned to their proper owners, as we should be doing with all contested lands. But I haven’t seen any historian actually undertake that research project into the land claims within wilderness system. Nor do I see any definite, clear proposal coming from scholars about where and how to alter the size, shape, or rules governing our wilderness areas. Meanwhile, let it be noted that any American citizen, Indian or non-Indian, has free and equal access to the nation’s wilderness, which is more than can be said about universities or suburbia.

Error # 2:

The wilderness is nothing real but is only a cultural construct dreamed up by rich white romantics.

I trace some of this oversimplified thinking to Roderick Nash’s book, *Wilderness and the American Mind*, which (for all its many virtues) set up a flawed narrative that environmental historians have cribbed from ever since. The now standard story starts with an ancient, intense Judeo-Christian hostility toward the wild, an anti-wilderness culture of spectacular proportions and longevity. That hostility supposedly reached a crescendo in Puritan New England, where every farmer stepped out of his saltbox scowling at the forest. Then the story moves on to a dramatic reversal of attitudes as affluent, white, educated, secular, urban Americans became sensitive romantic lovers of Nature. Part of the scarcely hidden moral in that story is that ordinary people, without education or income, have been in serious cultural lag and cannot be depended on for any significant environmental change. But a more complicated reading of the past would suggest that the love of wilderness was not simply the “discovery” or “invention” of a few rich men with Harvard or Yale degrees coming at the end of a long dark age.

If you assume that standard account, then it becomes very easy to turn the entire story into a polemic against elitist snobs who seek the sanctuary of wilderness at the expense of peasants, workers, Indians, or the poor of the world. Of course there were and are people like that. If the story didn’t have a kernel of truth in it, the revisionists would not get any kind of hearing at all. But it is a small kernel, not the whole complicated truth of what wilderness has meant to people through the ages or what draws them to protect wilderness today.

Contrary to the established story, the love of Nature (i.e., wilderness) was not merely a “cultural construct” of the Romantic period in Europe. It has much older cultural roots, and it may even have roots in the very structure of human feelings and consciousness going far back into the evolutionary past, transcending any cultural patterns. Historians of late have been far too quick to dismiss as “essentialist” any deep residuum of humanity and to reduce all thought and feeling to shifting tides of “culture.” Nineteenth-century Romanticism, with its glorification of the sublime, was indeed a cultural expression, but it also may be understood as an effort to recover and express those deeper feelings which in all sorts of cultures have linked the beauty of the natural world to a sense of wholeness and spirituality. The enthusiasm for wilderness in America was undeniably a cultural fashion, but it also drew on that other-than-cultural hunger for the natural world that persists across time and space. Finally, it drew in the United States on a frontier-nourished spirit of liberty, which itself reflected both cultural and biological needs. Most importantly, that enthusiasm was felt by poor folks as well as rich.

Historians have tended to miss the broad social appeal of the wilderness movement, particularly in the twentieth century. They like to feature that brash, big-game hunting, monied New Yorker, Teddy Roosevelt, especially if they want to do a little lampooning, and ignore all the men and women from more humble origins, before and

after him, who played an important role in saving the wilderness. John Muir and Ed Abbey, to be sure, get plenty of attention though historians have seldom appreciated the fact of their rural, non-elite roots. Nor do they give much emphasis to the millions of wilderness seekers who do not like to kill big animals or thump their chests or order from Eddie Bauer catalogs. And then, after reading the poorer class of people out of the wilderness “construct,” the historians turn around and proclaim: “See, wilderness has been an upper-class fetish all along.” Finally, with no little condescension and inconsistency, they set out to correct the “naive,” popular, grassroots “misunderstanding” of these matters.

Error # 3

The preservation of wilderness has been a distraction from addressing other, more important environmental concerns.

Precisely what are those problems? The protection of less exalted beauty close to home, we are told, not only in the remote, western public lands. The health and well being of urban people, particularly impoverished minority people, in the neighborhoods where they live. The wise and efficient use of natural resources that furnish our means of living. I grant that all these are important problems for environmentalists to face. They are in many ways linked, and they should not be severed and rigidly compartmentalized one from one another. Actually, I don't know any wilderness advocates who are single minded, who deny the existence or importance or interconnectedness of any of those other environmental problems. There may be some, but I have not met them. But I have met and will defend, the person, who out of deep moral conviction, believes that preservation of the world's last great wilderness is a higher obligation than cleaning up the Hudson River or preventing soil erosion. Someone who gives his or her life to wilderness issues instead of those other problems is not necessarily misguided or immoral or needing to be “reeducated.”

But the main historical issue here is whether the wilderness movement has in fact significantly diminished American interest in other environmental problems. The claim that it has is repeatedly made; outside the carefully hoarded Wilderness Areas, it is charged, the country is a mess and their wilderness “obsession” encourages many environmentalists to do nothing about it. It is sometimes argued that preserving wilderness gave Americans the green light for exploiting other less pristine environments with no compunction. But where is the evidence that this has been so on any important scale? The major reason we abuse land, as Aldo Leopold told us a while back, is “because we regard it as a commodity belonging to us” rather than “a community to which we belong.” Protecting wilderness by itself may not change that situation, but neither is it responsible for it.

Since the Wilderness Act was passed in 1964, the United States has seen an extraordinary increase in the number of people who call themselves environmentalists, and the issues they are working on range from preserving remnant wetlands threatened by shopping malls to stopping toxic dumping on Indian reservations to getting emission controls on smokestacks. The movement has become more and more diverse, inclusive, and pervasive. Far from being a distraction, the example of wilderness activism may even have encouraged the explosion of that diversification of environmental concern occurring across the whole country!

I live in a place where the immediate, compelling, and most practical need is to create an agriculture that is less destructive to soil, water, and biota, along with preventing real-estate developers from turning our towns into cultural and biological deserts. I serve on the board of directors of the Land Institute, which is trying to meet that important environmental need. Yet I can still cherish the thought of large, unmanipulated wilderness on this continent where the processes of evolution can go on more or less as they have for millennia. Does my commitment to saving wilderness in Alaska “alienate” me from the place where I live? Some historians say it must, but people are more complicated than that. Like millions of other Americans, I have a whole spectrum of concerns, near and far. I can support the Library of Congress without losing interest in my local public library.

We do have a legacy of bad land-use all over this country, which has left us with degraded forests, grasslands, and cities, and that legacy requires profound reform along a broad front. Developing an ethic of care and restraint wherever we live and wherever we take our resources—on that 95% of the nation's land area not protected as wilderness – is a clear, important need. How do we address it and move toward intelligent, just and wise use of land beyond the wilderness? Our recent history does not suggest that we need to get rid of the wilderness “fetish” in order to do so, or that we need to trash the leading popular arguments for preserving wilderness, which on the whole have worked pretty well against implacable opposition.

The wilderness has been a symbol of freedom for many people, and it is a primordial as well as cultural sense of freedom that they have sought. Freedom, it must be granted, can become another word for irresponsibility. Yet almost always the preservation of wilderness freedom in the United States has been interwoven with a counterbalancing principle of moral restraint. In fact, this linkage of freedom and restraint may be the most important feature of the wilderness movement. Those 100 million acres exist not only as a place where evolution can continue on its own terms, where we humans can take refuge from our technological creations, but also as a place where we can learn the virtue of restraint: this far we drive, plow, mine, cut, and no farther.

Old-time religion enforced moral restraint on their followers by the practice of tithing, a practice that has almost completely disappeared under the impact of the market revolution. But the practice of tithing is too good an idea to lose. Without saying so, we have created in the form of wilderness a new, more secular form of the ancient religious tithe. We have set aside a small portion of the country as the part we return to the earth that supports us, the earth that was here before any of us. We are not yet up to a full tithe, but we are still working on it.

A place of restraint as well as a place of freedom for all living things, the wilderness has promoted, I believe, a broader ethic of environmental responsibility all across the nation. Far from being an indefensible obsession, wilderness preservation has been one of our most noble achievements as a people. With no broad claims to American exceptionalism, I will say that here is a model of virtuous action for other societies to study and emulate. This is not to say that historians have been wrong to criticize weaknesses in the wilderness movement. They have only been wrong when they have denigrated the movement as a whole, carelessly encouraging its enemies, and made bad historical arguments. The real danger we face as a nation, we should remember, is not loving the wilderness too much but loving our pocketbooks more.

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¹ I am using the cautious but authoritative estimate of Douglas H. Ubelaker of the Smithsonian Institution, in his article "North American Indian Population Size, A.D. 1500 to 1985," *American Journal of Physical Anthropology*, 77 (1988): 291. He calculates an average density of 11 people per one hundred square kilometers, ranging from a low of 2 or 3 in the Arctic and Subarctic to a high of 75 in California. Much larger and more controversial are the estimates of H.F. Dobyns, *Their Numbers Became Thinned* (Knoxville: University of Tennessee Press, 1983).

Wilderness Is All In Your Mind

By Roderick Nash, *Backpacker*, February/March, 1979, pp. 39-41, 70-72

Originally delivered as the 1978 Wilderness Resource Distinguished Lecture at the University of Idaho Wilderness Research Center on April 18, 1978, under the title "Wilderness Management: A Contradiction in Terms?"

Wilderness does not exist. It never has. It is a feeling about a place, part of the geography of the mind. In an effort to construct a workable definition, we draw lines on maps and pass complicated laws. We act as if wilderness were real—rocks, trees, canyons, mountains, - but it is actually a state of mind evoked by a state of nature, a quality associated by some people with some places. This explains why the conditions under which one visits a place are so crucial to the so-called wilderness experience. It also suggests why wilderness management may be a contradiction in terms.

Wilderness is the uncontrolled. Dig back far enough into the historical meaning of "wilderness" and that concept emerges as the essence of any definition. *Will*, the root word in early Teutonic languages of both *wild* and *wilderness* meant chaotic, unruly, disorderly – literally will-full. An angry mob of people beating at the castle gate was said to be wild – ungovernable, out of control. So were animals that man had not domesticated or tamed. The place one found such uncontrolled animals, called *deor* in the old tongues, was wild-deor-ness—literally the place of the wild beasts. Their presence signified the absence of human control.

Contemporary meanings of wilderness emphasize the same concept. When he drafted the Wilderness Act, Howard Zahniser, executive director of The Wilderness Society, chose as his principal descriptive adjective an unusual word: "untrammled." When Zahniser began using it in 1956, everyone assumed that his secretary had erred in typing "untrampled." But Zahniser stood behind his original choice, and with good reason. A trammel, he explained, is a net for catching wild birds or fish. Alternatively, the word signifies a shackle used to slow the gait of a horse. The central idea is that of restraint, control, management by man. Untrammled means the opposite.

The uncontrolled is unpredictable and therefore potentially dangerous. An untrammled horse is a bucking bronco. In the psychology of wilderness we cannot minimize the centrality of danger, risk, and fear. To be true to the basic definition, wilderness should be a place where it is possible to get lost, to become, literally, bewildered (the root word, *will* is the same). Reducing this possibility may make a place more pleasant to some people, but it will be less wild. For this reason the existence of trails, guidebooks, ranger patrols, and well-organized search and rescue squads poised to bail out the unlucky or incompetent strikes at the very essence of wilderness. And since wilderness is a state of mind, even the knowledge that these things exist diminishes the wilderness feeling. It is even arguable that as soon as we label a region wilderness, we destroy it as wilderness.

Maps have an especially erosive effect on wilderness in that they make the unknown known. Aldo Leopold defined wilderness in 1945 as "a blank spot on the map." It was this for Columbus, Lewis and Clark, John Wesley Powell, and still for Leopold as a young officer in the United States Forest Service in the New Mexico Territory in 1909. Presently the United States Geological Survey is moving inexorably ahead with its intent to publish 15- and 75-minute topographic maps for the last spots in the 48 contiguous states. Alaska is next. The completion of this monumental task - the reduction of the United States to the scale of one inch to the mile—will be a just cause for celebration for that part of ourselves and our culture that seeks to order, organize, measure, and control. But for the other part (the right side of our brain, psychologists believe), there is something terribly sad and terribly final about the end of uncertainty. At least those who understand what wilderness means cannot rejoice in the prospect of a country that is totally mapped.

The history of wilderness management is the history of increasing control over wilderness. But for a half-century after the establishment of the first reserves, wilderness preservation did not entail wilderness management. It simply meant designation. You drew a circle on a map as, for instance, in the cases of Yellowstone National Park (1872) and Gila Primitive Area (1924), and concentrated on keeping things like roads and buildings out. No one was concerned with what people engaged in recreation did in the wilderness. It was not a matter of oversight—in fairness to the federal land administrators of this era, there really was little to manage.

Before 1940 very, very few Americans ventured into the backcountry. It is easy, amidst the widespread touting of the wilderness today, to forget that our fathers and grandfathers were still very much a part of the frontier-shaped value system that emphasized conquest of, not communion with, wild places and things. As we wander the well-stocked aisles of today's outdoor stores, it is also easy to overlook how hard it used to be to go off the beaten track for more than a day or two. Any contemporary backpacking outfit is largely composed of materials derived from post-World War II technology—nylon, aluminum, plastics, foam rubber, freeze dried foods. Without this equipment revolution, roughing it, in the parlance of the turn of the century, was indeed rough and unappealing.

What most outdoor-minded Americans before 1940 wanted was a room with a view—a comfortable lodge from which to watch wild nature without getting too close. After 1916 the first leaders of the National Park Service, Stephen T. Mather and Horace M. Albright, never forgot this in their campaign to make the parks popular. What emerged in Yosemite, Yellowstone, Glacier, and the Grand Canyon were resorts complete with paved roads, downhill skiing, putting greens, scheduled feedings of bears with hotel garbage, the firefall in Yosemite, and colored lights on night eruptions of Old Faithful. No one in the 1920s and 1930s saw these things as incompatible with the national park idea.

Fortunately for wilderness, the “circuses” were confined to small areas of the western parks. The few who did go into the wilderness in those years, like David R. Brower of the Sierra Club, could claim a first ascent almost every time they climbed a peak. For a magic interlude, wilderness management could actually consist of letting things alone.

One of the first indications that this could change was in a 1926 cartoon in the *New York Herald Tribune*. It was a before and after view of a mountain lake. In the first frame a lone horseman approached the lake, which was surrounded with pines and full of leaping trout. In the second view a solid rank of fishermen ringed the lake, and their camps obliterated the scenery.

A decade later Lowell Sumner, a regional wildlife technician with the National Park Service, made one of the first official recognitions that wilderness managers could not rest content with merely setting land aside from development. In his 1936 report on parks in California's Sierra, Sumner wondered “how large a crowd can be turned loose in a wilderness without destroying its essential qualities.” Sumner was among the first Americans to understand that if wilderness is to exist in the national parks, the parks “cannot hope to accommodate unlimited numbers of people.” Sumner also understood that wilderness management could pose a threat to wilderness values. He urged that only “the very simplest maintenance activity” be undertaken in wilderness.

The Wilderness Society, organized in 1935, initially reflected the designation-is-enough perspective on wilderness preservation. The idea was to keep adverse influences out of wilderness rather than to understand and control what was happening within its borders. But Robert Marshall, a Wilderness Society founder and leading advocate of preservation in the 1930s, quickly perceived that there was an internal dimension to wilderness protection. As early as 1933, Marshall's contribution to *A National Plan for American Forestry* suggested that backcountry campsites could be overused and urged the education of recreational visitors in camping etiquette.

In 1937 Marshall, then chief of the Division of Recreation and Lands in the United States Forest Service, toured the mountains of California with members of the Sierra Club. The party visited high country severely damaged by the grazing of pack stock and the behavior of campers. After the trip Marshall requested Joel H. Hildebrand, president of the Sierra Club, to organize a committee to advise the Forest Service with regard to wilderness management. He wanted to know about the feasibility of distributing and restricting use to the end that “certain areas may still be preserved in what might be termed a super-wilderness condition, or, in other words, kept entirely free even from trails, in order that a traveler can have the feeling of being where no one has ever been before.” For Marshall to pose this question was understandable, in that he personally coveted the extreme condition of wilderness and had, in fact, found it in the Brooks Range of Alaska on his explorations of the 1920s and early 1930s.

The communications between Marshall and the Sierra Club in 1937 and 1938 constituted the first recognition that recreational management of wilderness could threaten wilderness. The construction of trails was recognized as a problem for persons who wanted the sense of being in pristine country. Trail signs and established campgrounds also came in for criticism, as did the grazing of pack animals and the cutting of living trees for bough beds and

firewood. The Sierra Club concluded its report by recommending that high-country rangers or guards be appointed to enforce the rules. But neither Marshall nor the Sierra Club then understood that the rangers themselves, and the rules, might also adversely influence wilderness perception.

In the November 1940 issue of *American Forests*, J.V.K. Wagar became the first to raise the possibility of licensing as a means of controlling the behavior of persons engaged in wilderness recreation. He began by pointing out that “nature once certified outdoorsmen” by weeding out and killing the weak, foolish, and careless. But now anyone could become a wilderness traveler, and many people were in the backcountry who did not know how to care for either themselves or the country. His suggested remedy was the Certified Outdoorsman. The National Park Service and the Forest Service would establish tests with the purpose of determining who was “safe to leave in the woods.” Once in possession of his license, the Outdoorsman would be admitted to wilderness.

Wagar’s proposal, which has support in some quarters today, has the advantage of making possible less intense wilderness management due to the fact that the users are skilled and careful. Search-and-rescue operations, for example, could be curtailed or eliminated. But the licensing idea strikes at the heart of the idea of uncontrolled country that is so central to the traditional meaning of wilderness.

Following the interruption of World War II, the Sierra Club renewed its interest in wilderness management. The club’s own outings, which at that time found more than a hundred persons traveling through the wilderness in one group, were a focal point. Club leaders were discovering that excessive recreational use could damage natural conditions just as severely as lumbering, mining, and commercial grazing.

One sequence of photographs published in the 1947 *Sierra Club Bulletin* showed the stages in the transformation of a lush mountain meadow into an eroded dust bowl. Discussing the problem under the heading “saturation of the wilderness,” Richard M. Leonard and Lowell Sumner declared, “We need a comprehensive technique of use that will prevent oversaturation of wilderness and still enable people, in reasonable numbers, to enjoy wilderness.” Among the management tools discussed were rotation of campsites, limitation on the length of stay by one party in the same area, and the use of transported oats rather than natural grasses for pack stock food. According to Leonard and Sumner, there already existed 24-hour limits on camping in some Sierra meadows. These 1947 rules must have been among the earliest such controls in wilderness management history.

In 1949 the Sierra Club sponsored the first High Sierra Wilderness Conference. One hundred federal and state administrators and outfitters joined to discuss the proposition that wilderness could be loved to death. The conferees, in other words, had the courage to recognize that they were part of the problem.

A recognizable problem in the 1950s, the crowding of wilderness reached crisis proportions in the 1970s. Several factors contributed to the wilderness recreation boom. The intellectual revolution that transformed wilderness from cultural enemy to cultural asset was nearing completion. The nation had grown up from its frontier adolescence. Only about three percent of the 48 states could be considered wild, and about the same amount was paved! For the great majority of Americans wilderness was no longer an adversary to be feared and conquered but a novelty to be sought as a refreshing antidote to an urban-industrial lifestyle and the controlling weight of an increasingly complex civilization. If the counterculture of the 1960s had any definable meaning, it was that the establishment had gone too far with growth, progress, control, and transformation. Nature acquired a new appeal. Charles Reich wrote about *The Greening of America*; Paul Simon and Art Garfunkle sang “I’d rather be a forest than a street.”

Better equipment, and the affluence and leisure to buy and use it, helped to open the wilderness. So did the publicity generated by the campaign for the Wilderness Act (1964) and the fight to preserve threatened wilderness such as the Grand Canyon, the North Cascades, and Hells Canyon. As a result, many Americans no longer thought of the national parks as resorts near the wilderness but rather as places to experience wilderness.

The proof of the new popularity of wilderness was in visitor statistics. Every part of the country could supply evidence, but the most dramatic varieties came from the “name” wildernesses of the West. Mount Whitney, the highest peak in the United States outside Alaska, is a case in point. Dominating California’s southern Sierra, Mount Whitney was first climbed in 1873. On August 4, 1949, a man climbed the peak with his father. Proudly, they signed the register on the summit, the sixth and seventh individuals to have done so that year. On August 11, 1972, the

same man climbed Mount Whitney with his son. Upon signing the register they noted with some shock that they were the 259th and 260th persons on record that day!

Or consider the Grand Canyon in Arizona, where the 280-mile float trip down the Colorado River is the most intensely supervised wilderness activity in the United States today. Due to the limited access to the river, a complete set of visitor statistics exists. They tell an incredible story.

Similar, if not quite so dramatic, statistical portraits could be drawn for the Middle Fork of Idaho's Salmon River, Washington's Mount Rainier, or New Hampshire's White Mountains.

Faced with this surge in popularity managers turned to the idea of carrying capacity. A stockman's term, it originally referred to the number of head of cattle that could graze a piece of range without causing its permanent deterioration. The point, of course, was to keep the number from exceeding the carrying capacity and ruining the range.

The first American to apply this concept to people and wild country was Lowell Sumner. In 1942 he wrote an essay concerning the biological balances in wilderness areas and urged that visitation be kept "within the carrying capacity or 'recreational saturation point'." Sumner defined this as "the maximum degree of the highest type of recreational use [that is, minimum impact camping] which a wilderness can receive, consistent with its long-term preservation." "Managers," Sumner urged, "should determine in advance the probable maximum permissible use, short of impairment, of all wilderness areas."

In 1942 Sumner's main concern was the biological carrying capacity of wilderness, the impact of people on nature. It was relatively easy to measure. An eroded meadow or fished-out lake wildernesses greatly exceeds the established carrying capacity, so lotteries are held. Applicants try to cheat the system; still the chances of drawing out a permit for a noncommercial, do-it-yourself trip have declined in places like the Grand Canyon to approximately one in 20. This is, to be sure, an extreme case, but the era of driving to a roadhead, parking your car, and taking off into the backcountry is definitely over, and with it ends much of what wilderness once meant.

Even with a permit in hand, control does not end. "No substitution" rules, in force in the Grand Canyon and on the Salmon River, require rangers to check drivers license or birth certificate for each member of a party. Then there is the frequently encountered practice of assigning campsites. For many wilderness users this is the final backbreaking straw. Their itineraries must be rigid. The wilderness is managed as a motel: check out and allow the next group to occupy the site. Extremes have also been reached in the regulation of camping procedure. Open wood fires are on their way out as part of a wilderness experience. In the proposed management plan for the Grand Canyon River trips, permittees are required to carry out all human sewage - for a party of up to 40 for a two-week trip! Rangers presumably will check the containers at the end of the trips to see that regulations have been observed. For many this would be the ultimate indignity—to people, and to the idea of wilderness.

If the recent history of wilderness management contains reason for concern, the future looms dark with problems. The interesting scenario of William C. Leitch entitled "Backpacking in 2078" assumes, quite plausibly that in the next century electronic technology, world population, and wilderness popularity will continue to grow at their recent rates. Leitch envisions a global, computerized reservation-permit system that tells his hypothetical applicant that he may take an 11-night trip three years after his application. He had, after all, enjoyed a three-week wilderness trip four years before. When the applicant appears at the appointed time and place he is issued a tiny transmitting device that informs rangers back at headquarters where he is at all times during his trip. He is also issued a small plate to imbed in his boot heel, to aid in search-and-rescue, but his Mayday attachment can summon a helicopter in half an hour. The large animals in the hypothetical park also have transmitting devices so that, say, human-bear interactions can be avoided. At headquarters it is like a giant game of chess.

The near-absolute control over the "wilderness" does, Leitch points out, guarantee the visitor a solitary experience. His itinerary is planned so he will encounter no other person for his allotted stay. Moreover, the natural resources in the park are in excellent condition, nearly undisturbed. The park of 2078, in short, is a management triumph; the only trouble is that the wilderness is dead - the victim of human control.

The Leitch scenario, to which anyone familiar with wilderness recreation could add, underscores the terrible dilemma of wilderness management today. The managers have to manage. If they don't, crowds will quickly eliminate any vestige of solitude and the resource itself is damaged. But the very fact of management destroys the very essence of wilderness.

Awareness that wilderness management is indeed a contradiction in terms, but at the same time a necessity if anyone is to have any semblance of a wilderness experience, is a prerequisite to enlightened planning for the future. Wilderness managers are not bad guys. Things would be worse without them. But in controlling wilderness they might attempt to be as unobtrusive as possible.

What this means is that the element of risk, the presence of danger and mystery, should be cherished and protected. Better to have an occasional backpacker killed by a bear than to put transistors in every moving thing in the backcountry along the lines of the Leitch forecast. Better to reduce visitation than to institute mandatory carrying out of human feces. Better to require wilderness licensing as evidence of minimum-impact camping skill than to send waves of patrolling, ticket-writing rangers through the mountains and down the canyons. Better to have some visitors get lost than to have signs at every trail crossing. Better to give self-guided but well-trained and properly equipped parties precedence over commercially outfitted and guided safaris in allocating limited time in wilderness. If that means that some people cannot make the trip, tough. The ability to write a check to a professional guide is no substitute for physical, intellectual, and psychological preparedness. Let those who want to go badly enough compete and qualify as they do, for instance, for state universities, rather than buy their way into wilderness.

The point is to manage so that less management is necessary. Upon this seemingly simple, but enormously difficult principle hangs the fate of everything the wilderness preservation movement has tried to achieve. The sad alternative is to have wilderness that is not wild.

National Parks and Their Wilderness, A Compilation of Historic Viewpoints

By Douglas W. Scott, Campaign for America's Wilderness (formerly Pew Wilderness Center), Washington, D.C.



PEW WILDERNESS CENTER

Briefing Paper

NATIONAL PARKS AND THEIR WILDERNESS

A Compilation of Historic Viewpoints

Douglas W. Scott
Policy Director, Pew Wilderness Center

Our parks are reservoirs of wilderness.

—SEN. HUBERT H. HUMPHREY
Congressional Record, February 11, 1957

The wilderness proper serves all park visitors. Those who penetrate it gain its fullest rewards. But, it is the part of a National Park that is not intensively used that makes a park, and the undeveloped wilderness beyond the roads furnishes the setting and the background. Take away the background, and the park atmosphere of the whole disappears, and with it a very large part of the pleasure of those whose only contact with wilderness is experienced as they look outward over it from the roadside.

—NATIONAL PARK SERVICE, *THE NATIONAL PARK WILDERNESS*
(Washington, D.C., September 1957): 15

The place of wilderness preservation in the National Park System has a rich history, subject to diverse viewpoints expressed within the National Park Service, Congress and the wilderness advocacy community. This paper bring together some of those viewpoints—quoted from original documents and, within each topic, in historical sequence.

I. THE WILDERNESS PURPOSE OF NATIONAL PARKS

– 1 –

Such regulations [by the Secretary] shall provide for the preservation, from injury or spoilation, of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition. The Secretary may ... grant leases ... of small parcels of ground, at such places in said park as shall require the erection of buildings for the accommodation of visitors; ... and the construction of roads and bridle-paths therein.

—AN ACT TO SET APART A CERTAIN TRACT OF LAND LYING NEAR THE
HEADWATERS OF THE YELLOWSTONE RIVER AS A PUBLIC PARK (1872)¹

– 2 –

Every previous act demanded that the parks be preserved in their natural state. Their natural state was wilderness.

—HORACE M. ALBRIGHT (RECOLLECTION)²



– 3 –

Thus was born the idea of the national parks, perpetual wildernesses, the last remnants of Nature’s handiwork on this teeming earth. They are to be preserved forever in their natural state for the benefit and enjoyment of the people, to use the exact words of the act of Congress of 1872, creating the Yellowstone National Park. ...

Of course the parks should remain wildernesses. It is true that they are the only primeval areas protected by law from the ravages of civilization. They must be saved as such.

—HORACE M. ALBRIGHT (1928)³

– 4 –

... Congress set aside the *whole* of Yellowstone, reserving not merely a geyser, a canyon, or a spectacular waterfall, but the total scene in all its vastness and variety. The men who defined the first National Park were thinking in wilderness terms.

—NATIONAL PARK SERVICE (1957)⁴

II. THE 1916 ORGANIC ACT AND WILDERNESS

– 1 –

The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations ... by such means and measures as conform to the fundamental purposes of the said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

—AN ACT TO ESTABLISH A NATIONAL PARK SERVICE
AND FOR OTHER PURPOSES (1916)⁵

– 2 –

There has been a persistent question through the years about whether we were aware of and discussed the paradox of use and enjoyment of the parks by the people versus their preservation “unimpaired.” Of course, we knew there was this paradox, but the organic acts creating Yellowstone, Yosemite, and other parks always contained these opposite tenets. We felt it was understood to be the standing policy.

The same is true of wilderness: we didn’t specifically state policy about wilderness at this time [in the organic act] because we concluded it was understood. Every previous act demanded that the parks be preserved in their natural state. Their natural state was wilderness. That was why the 1916 act made no provision for roads, trails, buildings, or anything else—only that concessions be granted.

The general philosophy of the time was “use.” Resources were to be used. [That will] always be the national forest idea. Our group and followers were conservationists and preservationists. No use of resources, no change in the general state of national park areas. But roads to enjoy the outstanding, easy-to-visit features of a park while leaving most areas in wilderness....”

—HORACE M. ALBRIGHT (RECOLLECTION)⁶

– 3 –

Putting the policy enunciated by Congress in other words, it was the intention to preserve for coming generations, as well as for the people of our own times, certain sections of our original wilderness areas, in order that these bits of natural America may always be a source of interest, inspiration and pleasure to the people.

—HORACE M. ALBRIGHT (1928)⁷



– 4 –

The organic National Park Service Act of 1916 offers nearly as much flexibility in managing recreation resources as the multiple-use principle of the Forest Service. There is nothing in the Act directing how much of, or what part of parks to develop, nor is there any clause in the law or interpretive regulations stipulating the reservation of park units in wilderness condition. The Park Service has established some precedence [sic] in trying to retain wilderness zones. It is questionable, however, whether the will of the administrator can be sufficiently strong to prevent development in the long run.

—JAMES P. GILLIGAN (1954)⁸

– 5 –

Our national parks and many of our national monuments include within them our superbly beautiful pristine areas of wilderness. The chief threats to their preservation as such, under existing legislation, come from prospects for the extension of roads and the intrusion of recreation developments, perfectly good in themselves, that nevertheless are out of place in wilderness.

Unless provision is made to protect the primeval within the parks, eventually the developments may take over.

This process may be gradual, but, nevertheless, it is a prospect against which we can now set guards with no sacrifice.

It is true, however, that certain portions of the parks must be used for the roads and accommodations that make them accessible and hospitable. Accordingly this bill [the 1957 version of the Wilderness Bill] provides for the designation of such portions for the purpose. ***

If ever additional areas are needed for development, they can be designated, but only after a public notice that will give all concerned an opportunity to weigh the importance of diminishing the area of wilderness. ***

The primeval back country receives an added protection.

—SEN. HUBERT H. HUMPHREY (1957)⁹

– 6 –

Within the national parks and monuments in general there is at present no Act of Congress that would prevent a future Secretary of the Interior, or park administrator with his approval, from deciding to construct a road, a building, or any other installation that he would deem appropriate for a national park or monument anywhere within the park or monument.

The Yellowstone Act that inaugurated our national parks in 1872 provided for the retention of the wonders there ... ‘in their natural condition,’ and yet that Act has, of course, not interfered with the construction of the Yellowstone Park roads, the many buildings that are there, and the other developments that have so altered ‘natural conditions’ that the atmosphere in some parts of the park is that of a crowded city. ...

I am merely pointing out that [the roads and developments] have been constructed in accordance with the laws under which the park is governed, and there is nothing in that law to prevent such construction anywhere in the park.

In my opinion, if we are to make sure that we will have in the distant future our national park primeval back county still preserved as wilderness, we should declare here in Congress our purpose to do so.

REP. JOHN P. SAYLOR (1957)¹⁰

– 7 –

The fact that existing legislation does not insure the preservation of areas within the parks and monuments as wilderness is evident in the fact that under the existing [national park] legislation all roads and buildings and other development now in the parks and monuments have been constructed, and more and more could be. There is nothing in our [national park] legislation now to protect future administrators from



mounting pressures to use more and more of the back country for developments that would destroy them as wilderness.

—HOWARD ZAHNISER (1957)¹¹

– 8 –

When we started our basic studies for the program we now called MISSION 66, our first step was to review the laws which form the foundation and provide the guidelines for management and development of the Nation's National Parks. All of these laws emphasize the preservation of wilderness values. Clearly it is the will of the American people, as expressed by many acts of Congress, that the Secretary of the Interior through the National Park Service shall preserve the wilderness values of the National Park System for the enjoyment of the people.

—CONRAD L. WIRTH (1957)¹²

– 9 –

This basic act uses the singular form of the word “purpose”—a single objective, not several. That single purpose inseparably combines *use* with *preservation*!

—NATIONAL PARK SERVICE (1957)¹³

III. EARLY DISENCHANTMENT WITH NATIONAL PARK SERVICE EFFORTS FOR WILDERNESS PRESERVATION

– 1 –

COMPILER'S NOTE: In 1914 Mark Daniels was appointed as first “general superintendent and landscape architect” for the national parks. NPS historian Richard Sellars observes:

In remarks to a 1915 national park conference, Daniels stressed the need for systematic planning. Tellingly, he explained how the implementation of park plans depended in part on the successful promotion of tourism. He commented that the parks “can not get a sufficient appropriation at present from Congress to develop ... plans and put them on the ground as they should be, therefore we are working for an increase in attendance which will give us a justification for a demand upon Congress to increase the appropriations that are necessary”¹⁴

As Richard Sellars points out, “Daniels’ comments suggested a kind of perpetual motion that would become a significant aspect of national park management, where tourism and development would sustain and energize each other through their interdependence.”¹⁵

– 2 –

It may also be asked whether the National Parks from which, let us hope, industrial development will continue to be excluded, do not fill the public demand [for wilderness] here being discussed. They do, in part. But ... the Parks are being networked with roads and trails as rapidly as possible. This is right and proper.

—ALDO LEOPOLD (1921)¹⁶

– 3 –

The older champions of our national parks, [such] as John Muir, were among the leaders in this country to see in a broad way the value of preserving wild areas, but in recent years there has been an intensive movement to get vast crowds into the national parks, and at such a rate that vast areas of the parks are without question being severely injured.

—DR. CHARLES C. ADAMS (1925)¹⁷



– 4 –

COMPILER'S NOTE: In 1934 Bob Marshall, then chief forester of the Office of Indian Affairs, sent a memo to Interior Secretary Harold Ickes proposing a national policy to preserve wilderness areas.¹⁸ Marshall or Ickes gave a copy to NPS director Arno Cammerer, who responded with his own memo to Ickes, in which he defended the NPS record, particularly against Marshall's attacks on mountaintop scenic parkways being planned for Great Smoky Mountains, Shenandoah and the Green Mountains. In this defense, Cammerer told the secretary that while accommodating visitors running into the millions "we have been able to conserve the vast bulk of the parks free from roads and buildings, and other artificialities. Wilderness areas are given definite status on our Master Plans for individual parks and monuments."¹⁹

Marshall repeatedly asked Secretary Ickes, as early as 1935, for his consent that Marshall be allowed to transfer to the Forest Service. In a memo documenting a meeting with Ickes, Marshall quoted the secretary as asking: "Why don't you fight this wilderness battle in my department?"

I replied: Eighty percent of the roadless areas of 100,000 acres or more are in the national forests. The Park Service has wrecked most of its roadless areas and the possibility of saving the wilderness just from a sheer statistical standpoint lies primarily in national forests."²⁰

In 1937 Marshall did move to the Forest Service. Responding to a letter from Ickes, he wrote:

Aside from your periodical and splendid stopping of road construction in National Parks, the Park Service seems to have forgotten the primitive. ... the requirements of trail building machinery and large crowds are more important in their minds than the preservation of the primitive. ...

Of course, I know if you ran the Park Service the things I complain about would not occur. But no cabinet officer can possibly check details, and it is the details which are wrecking the wilderness environment of those extraordinary scenic areas which were set aside for special protection under the name of National Parks."²¹

– 5 –

COMPILER'S NOTE: In the 1930s the National Parks Association became increasingly alarmed at the dilution of the standards for national parks, both by development within the parks and by the New Deal expansion of the National Park System to include recreation areas. At its 1936 annual meeting, the trustees resolved that the Association would:

"segregate from all other national parks, and designate by the title National Primeval Parks System, those National Parks which, by reason of possessing primeval wilderness of conspicuous important and supreme scenic beauty, conform to the standards originally recognized under the title of National Parks" and urge that this become common usage by the agency, Congress and the American people."²²

– 6 –

... the present tendency in both National Forests and National Parks towards so-called development of their recreational resources to encourage maximum use by crowds of people ... serious impair[s] or destroy[s] the very qualities of wilderness and solitude, intangible though they may be, which are being sought after by an increasing number of people each year.

The conviction is steadily growing that neither National Forests nor National Parks are a perfect answer to this demand [for wilderness]. Perhaps there should be a third federal land classification for administrative purposes in which the key note of administration would be to let it alone.

—KENNETH A. REID (1939)²³



– 7 –

While national parks appeared to be changing standards in a passionate policy of play, national forests are developing, in their wilderness areas, a strictly limited system of natural museums made possible by the absolute exclusion of roads and all that roads imply.

—ROBERT STERLING YARD (1940)²⁴

– 8 –

National Parks ... often must justify their existence to the locality or state in which they are situated[,] principally on economic grounds. As long as the drums throb for tourist dollars, park administrators will find it hard to accommodate the increasing army of sightseers without extending development. It is highly improbable that a seemingly logical course of restricting visitation to any national park will be put into effect until every possible means of providing accommodation is exhausted. It is a fair question to ask how much of the parks will be developed by then. ...

... many administrators have excused pet development projects for wilderness lands on the theory that plenty of wilderness is being preserved elsewhere. There is a constant nibbling away of wilderness units, more slowly in the parks than in the forests.

—JAMES P. GILLIGAN (1954)²⁵

– 9 –

Whatever the prospect in other areas, conservationists have for many years assumed that within the national parks the preservation of wilderness is assured. ...

Charles Stevenson in his article for *The Reader's Digest* on "The Shocking Truth About Our National Parks," ... protests most strongly that less than half of the national park funds appropriated during this current fiscal year are "for the operation, maintenance, and protection of these parks as wilderness areas." He calls for the elimination of all purely resort activities and for "an alert and informed public opinion" that will "help the National Park Service get back to its traditional policy and functions." ...

Whether the answer is to seek more specific protection of wilderness with the parks, setting these aside from areas of "development," or simply a more earnest and vigilant adherence to the national park principles now threatened, it seems certain that those concerned with wilderness preservation as a national policy should be taking a good look at our national parks and the policies governing their protection and use. Even the wilderness of the National Park System cannot be taken for granted.

—HOWARD ZAHNISER (1955)²⁶

– 10 –

Generally speaking, in a National Park only those developments are justified which are required in order for visitors to use the park beneficially, and to enjoy and understand the natural scene. This means reasonable access by road and by trail to the area and to selected places within it that will give the visitor a good example of its major qualities.

—THE NATIONAL PARK WILDERNESS (1957)²⁷

– 11 –

As much as those in the [National Park] Service have done and continue to attempt in protecting this heritage, even with the help of their friends outside, pressure continually whittles away what is left of its wild lands. ... they seem to be refuted by the new Stevens Canyon road in Mount Rainier National Park. This unnecessary road, started about 25 years ago, merely enables the motorist to make a shorter loop drive. It is impossible to visualize time healing the abused landscape short of thousands of years, and the gash, visible for miles outside the park, belies the presence of wilderness.

—PAULINE [POLLY] DYER (1957)²⁸



IV. THE NATIONAL PARK SERVICE AND the Wilderness Act of 1964

– 1 –

COMPILER'S NOTE: In February 1956—the same month in which he began to draft the Wilderness Bill—Howard Zahniser, executive director of The Wilderness Society, together with David Brower, executive director of the Sierra Club, and Charles G. Woodbury, visited with NPS director Conrad Wirth in Washington, D.C. and provided him with a confidential copy of an early draft of what became the Wilderness Act. It was a hurried meeting after Wirth had attended a day-long session with the National Capitol Planning Commission and, as Brower noted, “We had only a few minutes to hurriedly sketch the proposal, and leave a preliminary draft of it.”²⁹

Nonetheless, Wirth sent Zahniser a formal and detailed 3-page letter of comments. Noting that the draft bill would include within the proposed National Wilderness Preservation System “certain primeval areas located within national parks and monuments,” Wirth wrote:

It is our belief that such primeval areas of national parks and monuments are, in fact, already wilderness areas with adequate protection against future nonconforming use. ... In these circumstances, it is our view that nothing would be gained from placing such areas in the National Wilderness Preservation System as provided in the bill. ...

Summed up, I feel that the national parks and some of the national monuments are the supreme wilderness regions of the Nation. Ever since the Yellowstone Act of 86 years ago provided for the retention of the wonders there, “* * * in their natural condition” the objective has been clear and definite. It was re-emphasized in the Act of 1916 establishing the Service. Therefore, I hope you will appreciate the fact that we view with some apprehension any proposed law which will deal with our fundamental objectives and policy. What we have now can hardly be improved upon.

—CONRAD L. WIRTH (1956)³⁰

[NOTE: The National Park Service opposed the Wilderness Bill from its introduction in 1956 until the arrival of President Kennedy, whose administration endorsed the legislation.]

– 2 –

As a result of informal suggestions by National Park Service officials there has been added a sentence at the end of section 2 (b)³¹ insuring that the provisions of the wilderness bill will not lower National Park Service standards and reaffirming these standards as already established in basic legislation [the organic act].

—SEN. JAMES E. MURRAY (1958)³²

– 3 –

I agree with the concept that areas set aside and developed for mass public use are zones of civilization in a wilderness setting, and that our park roads are corridors through the wilderness reaching or connecting these zones. I can see no other acceptable way that can be found to meet all the responsibilities placed upon the National Park Service by existing laws. As a matter of fact, this situation is specifically recognized in the current bill establishing a National Wilderness Preservation System. Under provisions relating to the National Parks, the developed and road areas will be described and then what is left will be wilderness.³³ Under the standards established by the act, at least 98 percent of park lands will qualify as wilderness.

—STEWART L. UDALL (1961)³⁴



– 4 –

Under the standards which would be established for admission of areas to the National Wilderness Preservation System under current legislative proposals, 99 percent of national park lands would qualify.

—CONRAD L. WIRTH (1961)³⁵

V. WILDERNESS “ZONING” IN THE NATIONAL PARKS

– 1 –

... wilderness areas could, it seems to me, be fitted into the various National Parks. As far as I can see there would usually be necessary neither new costs nor new laws nor new work—simply a well-pondered administrative decision delimiting the areas, and in such area[s] establishing a permanent “closed season” on roads, cottages, or other developments inimical to the wilderness use.

—ALDO LEOPOLD (1925)³⁶

– 2 –

The thought has been expressed during the last year or two by a number of conservationists and wilderness-minded folk that perhaps the [National Park] Service will be unable to withstand the pressure for development until every corner of the parks has been invaded and the wilderness values submerged. Such persons have explained their opposition to the addition of the Kings Canyon, Mount Olympus and similar areas to the National Park System on the ground that they consider the regions in question to be safer from human interference under their present status. Perhaps it is in recognition of this point of view that the Forest Service has reserved from future development eighteen “primitive areas,”...

[The National Park Service] cannot hope to accommodate unlimited numbers of people and ... soon a line will have to be drawn against further development. ... [There is a need for] definite recognition of remnant wilderness areas and establishment of a code of administration designed to protect them from all but the very simplest maintenance activity.

—E. LOWELL SUMNER, JR. (1936)³⁷

– 3 –

If and when this great area [Olympic] is “saved” for the public, the dispute, which is already under way, will be between the wilderness advocates and the park administration. The latter, if it follows precedent, will open up this wilderness to the public by roads and install hotels and other accommodations. But pressure is strong to hold it, not as a typical developed national park, but as a true wilderness, dedicated to “youth,” and accessible only by trail, on foot or pack horse, with over-night shelters of course, and other aids to pedestrians and caravans.

Meanwhile a terrific drive is on by the National Park Service, to capture and capitalize the sentiment back of the wilderness idea, and with this backing to secure as parks, the 11 million acres of wilderness or “primitive” areas already established within the National Forests ... One of the most pressing arguments used is the assumed precarious status of any area set aside for a wilderness solely by executive orders of the [Chief] Forester or Secretary of Agriculture. For this reason I felt that wilderness areas should be given legal status by acts of congress, but that one the other hand they should remain as integral portions of the National Forests and not be transferred and take park status, to be subjected to the pressure for development which is desecrating so many of our most prized National Parks like Yellowstone and Sequoia.

—H. H. CHAPMAN (1938)³⁸

– 4 –

The growth of a protective attitude toward wilderness values in this country, particularly in the last decade, is an important asset to our national parks. It gives strong support to a restraining hand in the



planning and authorization of development programs, ...

Several years ago when we first developed the Master Plan, the subject that received the most attention was that of the wilderness area. We included a map in the Master Plans of several of the larger parks to outline which [lands] were to be designated as wilderness areas and set aside for that purpose. Our first difficulty was with the definition of wilderness areas. We found that some of our authorities would not approve an area as a wilderness area, because it contained a shelter cabin. We found practically no areas within national parks that would qualify under the Webster definition, as most of those proposed had at least one trail. In the long run, I feel that we shall have to give up the idea, as it was first proposed, and rather than approach the problem from the angle of setting aside wilderness areas within the national parks, we must approach it from the other direction—that is, we must restrict the limits of developed areas and apply the protection that would be given to these wilderness area to *all* of the area within the boundaries of the park that is not a developed area.

—THOMAS C. VINT (1938)³⁹

– 5 –

The concept [of the Wilderness Act] has great promise for the days coming soon, when the zoning we have always understood to exist in the parks [sic] will need this careful spelling out to counteract pressures such as we hardly used to dream of.

—DAVID BROWER (1956)⁴⁰

– 6 –

We should consider the parks as a whole as “wilderness” and tag the exceptions, rather than classifying special portions of the parks as “wilderness.”

—EIVIND SCOYEN (1955)⁴¹

– 7 –

What we all want to do [with the draft Wilderness Bill] is to start where we are and move toward where we want to go. We are convinced that it is possible to get there from here. Where we are is the Act of 1916, which in itself does not preserve wilderness. Old Faithful Inn, the Ahwanee, Going-to-the-Sun Highway, the proposed Yosemite warehouses, and the proposed Shrine of the Ages Chapel [over the South Rim of the Grand Canyon] are not wilderness. The 1916 act permits such development anywhere in the parks,... This is not to say the developments are wrong, but just that they are permitted. Glacier View Dam [proposed in Glacier National Park] or Smoky Range reservoir would not be wilderness. The present law permits them... The Park Service, backed by the Secretary, acted against Glacier View. We expect that there will be a similar position against Smoky Range, but still the Park Service could be constrained not to act[,] as it was in Dinosaur [where the NPS was muzzled by the secretary and president, who supported the Echo Park Dam.] So the Act of 1916 isn't all it could be, and that's where we are.

Where do we want to go? We think it is toward Congressional recognition, how non-existent, of our best wilderness, whoever administers it[,] and toward a greater opportunity for public support of it. ... The public does pretty well—witness Dinosaur, the Tetons, Olympic, Rainier and Hidden Valley ... and so on—when it has a chance. ... The public ... also stands ready support these values should the administrator fail, as could happen in the parks all too easily should one of your successors, for example, not be a career man.

—DAVID BROWER (1956)⁴²

– 8 –

I understand that Connie Wirth read his letter to Zahnise [Howard Zahniser] before your Advisory Board in his effort to get the Board to recommend against the [wilderness] bill.

To me, a sentence of Connie's in a recent letter to Fred Packard [executive secretary of the National Parks Association] about the Shrine of the Ages is the key to the present, and I hope temporary, attitude of the National Park Service. Fred had wanted any shrine to be within the limits of the village, and Connie



replied that the limits had never been designated. They ought to be designated as well as they can be now, with study, and not just sooner or later by chance. The bill would spur the designation.

... park-facility development certainly needs a better limitation than now exists.

—DAVID BROWER (1956)⁴³

– 9 –

... this program [the Wilderness Act] vested in Congress the power and opportunity to fix firm and lasting limits on the extent to which the remnant wilderness of our parks might be further developed.

—REP. PATSY T. MINK (1970)⁴⁴

VI. WILDERNESS BOUNDARIES IN THE NATIONAL PARKS

– 1 –

The best protection we can give the core of wilderness is to fully protect its critical fringes ... this fringe is, in fact, the part of the wilderness most exposed to visitor use and enjoyment.

The extension of boundaries to the edge of roads which we recommend will not, in any way, conflict with or impair existing visitor use patterns or convenience facilities and comforts. Nor will it impede Park Service management or administration. It will, on the other hand, strengthen the protection of natural features of which the park was established.

—DOUGLAS W. SCOTT (1972)⁴⁵

– 2 –

... we see that the National Park Service is, ... as a matter of blanket policy, setting the boundaries of its proposed wilderness units back from the edge of roads, developed areas and the park boundaries by “buffer” or “threshold” zones of varying widths. There is no requirement for that in the Wilderness Act. No other agency draws wilderness boundaries in this way, which has the effect of excluding the critical edge of wilderness from full statutory protection. The Wilderness Act calls for the designation of wild lands which are of wilderness “character.” This term “wilderness character” applies only to the immediate land involved itself, not to influences upon it from outside areas. This point was specified precisely in an early amendment to the wilderness bill, which at one time used the alternative term “Wilderness environment.” On July 2, [1960], the then chairman of the Interior Committee introduced S. 3809 ..., [a] “clean bill” version of the wilderness bill. One of the amendments embodied there was the change from the term “wilderness environment” in the act’s definition to the term “wilderness character.” Senator Murray explained this amendment, and I quote: “The word ‘character’ is substituted because ‘environment’ might be taken to mean the surroundings of wilderness rather than the wilderness entity.” (Congressional Record for July 2, 1960.) What this amendment made clear is that the suitability of each acre of possible wilderness is to be ascertained on the basis of that wilderness entity, not on the basis of insubstantial outside influences. Sights and sounds from outside the boundary do not invalidate a wilderness designation or make threshold exclusions necessary, as a matter of law.

On the same point, I note that, for example, wide swaths of land are excluded from wilderness adjacent to the Generals Highway in Sequoia National Park. Yet, I find no plans for any new development in that area in the recently-approved park master plan. So I fail to see the reason for excluding these wild lands, the critical fringes of the wilderness, while there would seem to be good reason for putting them within the full protective boundary of the designated wilderness.

In the absence of good and substantial reasons to the contrary—and I am [sic] specific, case-by-case reasons—the boundaries of wilderness areas within national parks should embrace all wild land. There is no



lawful policy basis for massive exclusions of qualified lands on which no development is planned. I can appreciate the interest of any agency in not surrendering their full administrative discretion over such areas, to build and develop or not to build and develop, but that is what the Wilderness Act mandates the National Park Service to do. This is not out of any suspicion or concern for Park Service stewardship, but because we in the Congress recognized the pressures that would face the national parks, and provided in the Wilderness Act the statutory basis for strengthening the protective hand of the National Park Service.

—SEN. FRANK CHURCH (1972)⁴⁶

An earlier version of this compilation was prepared for a conference on national park wilderness in the National Park Service's Intermountain Region, held in Estes Park, Colorado on May 1-2, 2001. Doug Scott may be reached at Pew Wilderness Center, 705 Second Avenue, Suite 203, Seattle, WA 98104; (206) 342-9212; doug@pewwildernesscenter.org.

¹ 17 Stat. 32; 16 U.S.C. 22 (March 1, 1872).

²² Horace M. Albright and Marian Albright Schenck, *Creating the National Park Service: The Missing Years*, (Norman: University of Oklahoma Press, 1999): 126-127.

³ Horace M. Albright, "The Everlasting Wilderness," *The Saturday Evening Post* 201, no. 13 (September 29, 1928): 28.

⁴ National Park Service, *The National Park Wilderness*: 13 (Washington, D.C., September 1957) Emphasis in original.

⁵ 39 Stat. 535; 16 U.S.C. 1 (August 25, 1916).

⁶ Albright and Schenck, *Creating the National Park Service*.

⁷ Albright, "The Everlasting Wilderness": 63.

⁸ James P. Gilligan, "The Contradiction of Wilderness Preservation in a Democracy," *Proceedings*, 1954 convention, Society of American Foresters, October 26, 1954, unpaginated 4-page reprint, copies in The Wilderness Society files and author's files. This paper was reprinted, with an accompanying editorial, in *The Living Wilderness* (spring-summer 1955).

⁹ Sen. Hubert H. Humphrey, *Congressional Record*, February 11, 1957.

¹⁰ Rep. John P. Saylor, "Saving America's Wilderness," *Congressional Record*, July 12, 1956. Saylor was the lead sponsor of the Wilderness Bill in the House.

¹¹ Howard Zahniser to Hon. James E. Murray, Chairman, Committee on Interior and Insular Affairs, U.S. Senate, 22 July 1957: 6; copy in The Wilderness Society files and author's files. Murray was the lead sponsor of the Wilderness Bill in the Senate in 1956.

¹² Conrad L. Wirth, preface, *The National Park Wilderness*: 9.

¹³ *The National Park Wilderness*: 14. Emphasis in original.

¹⁴ Sellars cites Daniels' comments from *National Park Conference, 3rd, Berkeley, Calif., 11-13 March 1915*, *Proceedings* (Washington, D.C.: Government Printing Office, 1915): 19-20.

¹⁵ Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997): 21.

¹⁶ Aldo Leopold, "The Wilderness and its Place in Forest Recreational Policy," *Journal of Forestry* 19, no. 7 (November 1921): 720.

¹⁷ Dr. Charles C. Adams, "Ecological Conditions in National Forests and in National Parks," *The Scientific Monthly* 20, no. 6 (June 1925): 562.

¹⁸ Report, "Suggested Program for Preservation of Wilderness Areas," Robert Marshall to Harold Ickes, April 1934, p. 8, National Archives, Record Group 79, File 601-12, Parks-General-Lands-General-Wilderness Areas, Pt. 1.

¹⁹ Arno B. Cammerer, "Memorandum for the Secretary," May 16, 1934. I obtained the copies of this and the ensuing memos from Marshall and Cammerer that I have in my files from the files of The Wilderness Society, prior to those files being sent to the Denver Library. Copies of these and other documents had been supplied, presumably in confidence, by Marshall to his close colleague Robert Sterling Yard, executive secretary of the Society, as evidenced by notations in Marshall's handwriting..

²⁰ Robert Marshall, "Interview with Secretary Ickes," December 7, 1935. Same source as note 17. On the top margin of this copy, Marshall wrote to Yard: "Dear Bob: This is for your very private files. It may interest you. Bob."

²¹ Marshall to Ickes, May 21, 1937. Same source as note 18.



- ²² Resolution quoted in William P. Wharton, "The National Primeval National Parks," *National Parks Bulletin* 13, no. 62 (February 1937): 3.
- ²³ Kenneth A. Reid, "Let Them Alone!" *Outdoor America* 5, no. 1 (November 1939): 7. Reid was the editor and general manager of the Izaak Walton League of America.
- ²⁴ Robert Sterling Yard, "Saving the Wilderness," *The Living Wilderness* 5, whole no. 5 (July 1940): 2.
- ²⁵ Gilligan, "The Contradiction of Wilderness Preservation."
- ²⁶ Howard Zahniser, editorial "Our National Parks," *The Living Wilderness* 19, no. 51 (winter 1954-55): 2.
- ²⁷ *The National Park Wilderness*: 21.
- ²⁸ Pauline Dyer, "Wilderness and the National Parks" (a review of *The National Park Wilderness*), *The Living Wilderness*. [My copy is undated, but I believe this comes from an issue in 1958].
- ²⁹ David R. Brower to Conrad L. Wirth, May 16, 1856: 1; copy in The Wilderness Society files and author's files.
- ³⁰ Conrad L. Wirth to Howard Zahniser, March 19, 1956; copy in The Wilderness Society files and author's files.
- ³¹ This wording became a part of section 4(a)(c) of the Wilderness Act as enacted.
- ³² "Changes in the Revised Wilderness Bill, S. 4028, From the Original Bill, S. 1176," included in remarks of Sen. James E. Murray, *Congressional Record* 104 (June 18, 1958): 11558.
- ³³ This was true of the version of the Wilderness Bill being referred to by Secretary Udall, and as passed by the Senate the following September. However, the law as enacted reversed the procedure, with the wilderness area being described and what was left out being left in regular park status subject to the provisions of the organic act and other relevant laws that allowed development.
- ³⁴ "Preservation and Use of Areas Administered by the National Park Service," Memorandum to Director, National Park Service from Secretary of the Interior Stewart L. Udall, March 20, 1961. Copy, from NPS Directors Staff Meeting minutes, March 23, 1961, in author's files.
- ³⁵ "Recent Magazine Articles on National Parks," Memorandum to Secretary of the Interior from Director, National Park Service, March 10, 1961. Copy, from NPS Directors Staff Meeting minutes, March 23, 1961, in author's files.
- ³⁶ Aldo Leopold, "The Last Stand of the Wilderness," *American Forests and Forest Life* 31 (1925): 604.
- ³⁷ E. Lowell Sumner, Jr., "The Wilderness Problem in the National Parks," excerpt from a *Special Report on a Wildlife Study of the High Sierra in Sequoia and Yosemite National Parks and Adjacent Territory*, October 9, 1936; National Archives, Record Group 79 (NPS) Parks-General-Lands-General-Wilderness Areas, Part 1. Sumner was a regional wildlife technician for the NPS.
- ³⁸ H. H. Chapman, "National Parks, National Forests and Wilderness Areas," *Journal of Forestry* 36, no. 5 (May 1938): 473-474. Chapman was president of the Society of American Foresters and a Forest Service partisan in the NPS-USFS competition of that era.
- ³⁹ Thomas C. Vint, "Development of National Parks for Conservation," *American Planning and Civic Annual*, edited by Harlean James (Washington, D.C.: American Planning and Civic Association, 1938): 69, 71. Vint was chief of planning for the National Park Service.
- ⁴⁰ David R. Brower to Horace M. Albright, April 30, 1956; copy in The Wilderness Society files and author's files.
- ⁴¹ Eivind Scoyen, in "View of the Wilderness Administrator: Park Wilderness," summary of a panel discussion at the Sierra Club's 4th Biennial Wilderness Conference, in David Brower, editor, *Wildlands in our Civilization* (San Francisco: Sierra Club, 1964): 158. At this time, Scoyen was Superintendent, Sequoia and Kings Canyon National Parks.
- ⁴² David R. Brower to Conrad L. Wirth, May 16, 1956; copy in The Wilderness Society files and author's files.
- ⁴³ David R. Brower to John B. Oakes, May 16, 1956; copy in The Wilderness Society files and author's files. Oakes was the editor of the editorial page of *The New York Times*, and a member of the Secretary's Advisory Board on National Parks.
- ⁴⁴ Rep. Patsy T. Mink, "National Park Wilderness Studies 5 Years Behind Schedule," *Congressional Record*, July 27, 1970: H7214 [daily edition].
- ⁴⁵ Douglas W. Scott, testimony for The Wilderness Society, in *Designation of Wilderness Areas, Part III, Lassen Volcanic National Park as Wilderness Area*, Hearing before the House Subcommittee on National Parks and Recreation, Committee on Interior and Insular Affairs (92d Congress; 2d session) on H.R. 10655, April 27, 1972: 41.
- ⁴⁶ Sen. Frank Church, statement in *Preservation of Wilderness Areas*, Hearing before the Senate Subcommittee on Public Lands, Committee on Interior and Insular Affairs (92d Congress; 2d session) on S. 2453 and Related Wilderness Bills, May 5, 1972: 59-60. Church, the chair of the subcommittee, had been the floor manager when the Senate passed the Wilderness Act in 1961 and again in 1963.